South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

SUBJECT: **NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL ASSESSMENT**

PROJECT TITLE: **PROPOSED AMENDED RULE 1469 – HEXAVALENT CHROMIUM EMISSIONS FROM CHROMIUM ELECTROPLATING AND CHROMIC ACID ANODIZING OPERATIONS**

In accordance with the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD) is the Lead Agency and has prepared a Draft Environmental Assessment (EA) to analyze environmental impacts from the project identified above pursuant to its certified regulatory program (SCAQMD Rule 110). The Draft EA includes a project description and analysis of potential adverse environmental impacts that could be generated from the proposed project. The purpose of this letter and the attached Notice of Completion (NOC) is to allow public agencies and the public the opportunity to obtain, review and comment on the environmental analysis.

This letter, the attached NOC, and the Draft EA are not SCAQMD applications or forms requiring a response from you. Their purpose is simply to provide information to you on the above project. If the proposed project has no bearing on you or your organization, no action on your part is necessary.

The Draft EA and other relevant documents may be obtained by calling the SCAQMD Public Information Center at (909) 396-2039 or accessing the SCAQMD's CEQA website at http://www.aqmd.gov/ceqa/aqmd.html. Comments focusing on issues relative to the environmental analysis for the proposed project will be accepted during a 30-day public review and comment period beginning Thursday, October 9, 2008, and ending 5 p.m. on Friday, November 7, 2008. **Please send any comments to Ms. Barbara Radlein (c/o Office of Planning, Rule Development, and Area Sources) at the address shown above**. Comments can also be sent via facsimile to (909) 396-3324 or e-mail at bradlein@aqmd.gov. Ms. Radlein can be reached by calling (909) 396-2716. Please include the name and phone number of the contact person for your agency. Questions regarding the rule language should be directed to Ms. Cheryl Marshall at (909) 396-2567.

The Public Hearing for the proposed project is scheduled for December 5, 2008. (Note: This public meeting date is subject to change.)

Date: October 8, 2008 **Signature:** Steve Smith

Steve Smith, Ph.D.
Title: Program Supervisor
Telephone: (909) 396-3054

Reference: California Code of Regulations, Title 14, §§15070, 15071, 15073, 15085, 15105, 15371, and 15372

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765-4182

NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL ASSESSMENT

Project Title:
Draft Environmental Assessment (EA) for Proposed Amended Rule (PAR) 1469 – Hexavalent Chromium Emissions From Chromium Electroplating and Chromic Acid Anodizing Operations

Project Location:
South Coast Air Quality Management District: the four-county South Coast Air Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties) and the Riverside County portions of the Salton Sea Air Basin and the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project:
The objective of PAR 1469 is to further reduce the quantity of hexavalent chromium emissions and the associated cancer risk from the metal finishing industry by incorporating the latest amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations, as adopted by the California Air Resources Board (CARB) on October 24, 2007. For example, facility operators will be required to comply with a hexavalent chromium emission rate of 0.0015 milligram per ampere-hour (mg/amp-hr) for modified facilities and 0.0011 mg/amp-hr for new facilities. In addition, PAR 1469 would prohibit siting and constructing new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses. Other changes are proposed that include: 1) a broader definition of sensitive receptor; 2) more stringent surface tension requirements for certifying fume suppressants; 3) more stringent housekeeping practices; and, 4) a prohibition of sale, supply, or manufacture of chromium electroplating or chromic acid anodizing kits to unpermitted facilities. Other minor changes are proposed for clarity and consistency throughout the rule. PAR 1469 is estimated to reduce hexavalent chromium emissions by 40 percent, resulting in a reduction of cancer risk for most chrome plating facilities to less than 25 in a million. The environmental analysis in the Draft EA concluded that PAR 1469 would not generate any significant adverse environmental impacts.

Lead Agency:	**Division:**
South Coast Air Quality Management District	Planning, Rule Development and Area Sources

Draft EA and all supporting documentation are available at:	**or by calling:**	**Draft EA is available online by accessing the SCAQMD's website at:**
SCAQMD Headquarters 21865 Copley Drive Diamond Bar, CA 91765	(909) 396-2039	http://www.aqmd.gov/ceqa/aqmd.html

The Public Notice of Completion is provided through the following:

☑ Los Angeles Times (October 9, 2008) ☑ SCAQMD Website ☑ SCAQMD Mailing List

Draft EA Review Period (30-day):
October 9, 2008 to November 7, 2008

Scheduled Public Meeting Dates (subject to change):
SCAQMD Governing Board Hearing: December 5, 2008, 9:00 a.m.; SCAQMD Headquarters

The proposed project will have NO statewide, regional or areawide significance; therefore, NO scoping meeting was required or held for the proposed project pursuant to Public Resources Code §21083.9 (a)(2).

Send CEQA Comments to:	**Phone:**	**Email:**	**Fax:**
Ms. Barbara Radlein	(909) 396-2716	bradlein@aqmd.gov	(909) 396-3324
Direct Questions on the Rule to:	**Phone:**	**Email:**	**Fax:**
Ms. Cheryl Marshall	(909) 396-2567	cmarshall@aqmd.gov	(909) 396-3324

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Environmental Assessment for Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations

SCAQMD No. 1008008BAR
State Clearinghouse No: To Be Determined

October 2008

Author:	Barbara Radlein	Air Quality Specialist
Technical Assistance:	Eugene Kang	Air Quality Specialist
Reviewed By:	Steve Smith, Ph.D.	Program Supervisor, CEQA
	Cheryl Marshall	Program Supervisor, Rules
	Barbara Baird	District Counsel
	Jeri Voge	Senior Deputy District Counsel

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BARRY R. WALLERSTEIN, D.Env.

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CHAPTER 1 - PROJECT DESCRIPTION

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INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977[1] as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin referred to herein as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district[2]. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP[3]. The 2007 AQMP concluded that major reductions in emissions of volatile organic compounds (VOC), oxides of sulfur (SOx) and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone (the key ingredient of smog) and particulate matter (PM10 and PM2.5). Ozone, a criteria pollutant, is formed when VOCs react with NOx in the atmosphere and has been shown to adversely affect human health and to contribute to the formation of PM10 and PM2.5.

In addition to the extensive criteria pollutant control program in the AQMP, which includes traditional and innovative rules and policies, the SCAQMD, in cooperation with efforts at the local, state and federal level, has a history of reducing "toxic air contaminants" (TAC) or "air toxics" in the district. A substance is considered toxic if it has the potential to present a hazard to human health[4]. TACs are identified on a list by state and federal agencies based on a review of available scientific evidence. Exposure to TACs can increase the risk of contracting cancer or produce other adverse health effects such as birth defects and other reproductive damage, neurological and respiratory health effects. A health risk assessment is used to estimate the likelihood that an individual would contract cancer or experience other adverse health effects as a result of exposure to listed TACs.

Some TACs have the potential to cause adverse noncancer health impacts. A chronic effect is a noncancer health impact that is the result of exposure to a TAC over a long period of time. Chronic health effects are problems such as birth defects and reproductive damage, neurological, respiratory, and other adverse health effects. Acute effects may result from short-term exposures to a chemical. Examples of acute health effects include headache, respiratory problems, and eye and skin irritation.

In October 2007, the California Air Resources Board (CARB) adopted amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations. The ATCM, as amended, requires more stringent hexavalent chromium emission limits and housekeeping for all chromium plating and chromic acid anodizing operations and restricts the siting of new facilities near sensitive receptors such as residential or mixed-use areas and schools. To incorporate the more stringent measures in the ATCM and further control hexavalent chromium emissions from electroplating and anodizing activities as well as reduce the cancer risks to neighboring residents and businesses, amendments are proposed to Rule 1469.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PAR 1469 regulates hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations. Because the proposed project requires discretionary approval by a

[1] The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).
[2] Health & Safety Code, §40460 (a).
[3] Health & Safety Code, §40440 (a).
[4] Health & Safety Code, §39655.

public agency, it is a "project" as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the proposed project and has prepared this draft Environmental Assessment (EA) with no significant adverse impacts pursuant to its Certified Regulatory Program. California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110. Pursuant to Rule 110, SCAQMD has prepared this Draft EA.

CEQA and Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this Draft EA to address the potential adverse environmental impacts associated with the proposed project. The Draft EA is a public disclosure document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental effects of the proposed project; and, (b) be used as a tool by decision makers to facilitate decision making on the proposed project.

SCAQMD's review of the proposed project shows that the project would not have a significant adverse effect on the environment. Therefore, pursuant to CEQA Guidelines §15252, no alternatives or mitigation measures are required to be included in this Draft EA. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

PROJECT LOCATION

PAR 1469 would apply to facilities that conduct chromium electroplating and chromic acid anodizing operations throughout SCAQMD's entire jurisdiction. The SCAQMD has jurisdiction over an area of 10,473 square miles, consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB) as shown in Figure 1-1. The Basin, which is a subarea of the district, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal non-attainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east.

PROJECT OBJECTIVE

The objective of PAR 1469 is to: 1) further reduce the quantity of hexavalent chromium emissions and the associated cancer risk to nearby receptors from the metal finishing industry by incorporating the latest amendments to the ATCM for Chromium Plating and Chromic Acid Anodizing Operations, as adopted by CARB on October 24, 2007[5]; 2) require more stringent controls at affected facilities to reduce public exposure to hexavalent chrome; and 3) protect sensitive receptors including areas zoned for residences and mixed uses, schools, and by prohibiting new facilities within or near the protected land use types. PAR 1469 is estimated to

[5] Health & Safety Code, §39666(d).

reduce hexavalent chromium emissions by 40 percent. Further, PAR 1469 is expected to achieve a reduction in cancer risk for most chrome plating facilities to less than 25 in a million.

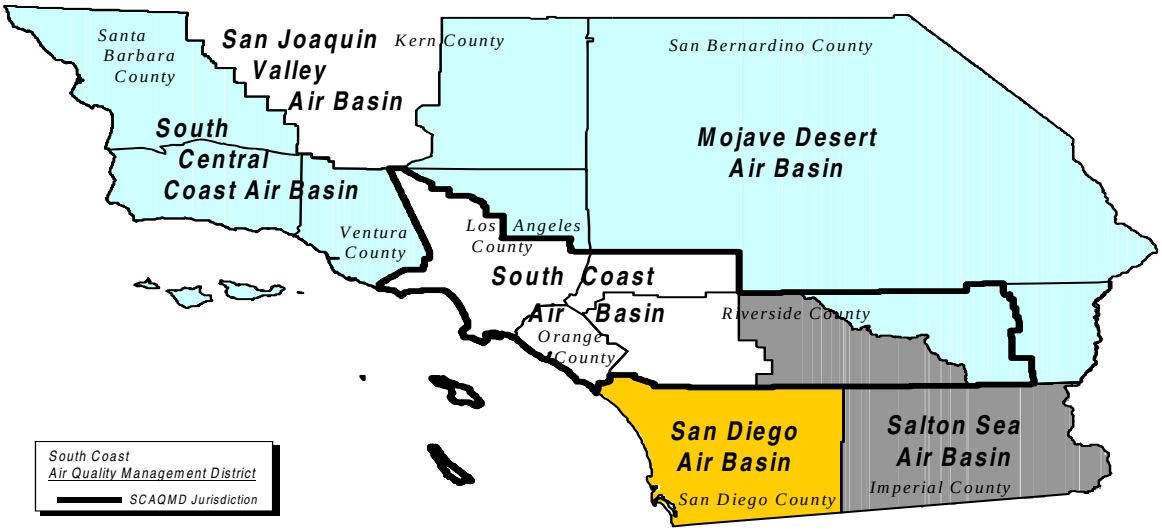

Figure 1-1
Boundaries of the South Coast Air Quality Management District

PROJECT BACKGROUND

Hexavalent chromium, cadmium, lead, nickel, copper, sodium hydroxide, sulfuric acid, and nitric acid are commonly used in the metal finishing industry and are identified in Table 1 of SCAQMD Rule 1401 - New Source Review of Toxic Air Contaminants as TACs with varying health effects (i.e., they are identified in Rule 1401 as carcinogenic, or having chronic or acute HIs). A chronic effect is a noncancer health impact that is the result of exposure to a TAC over a long period of time. Chronic health effects are problems such as birth defects and other reproductive damage, neurological, respiratory, and other adverse health effects. Acute effects may result from short-term exposures to a chemical. Examples of acute health effects include headache, respiratory problems, and eye and skin irritation.

Hexavalent chromium is a potent carcinogen. The Office of Environmental Health Hazard Assessment (OEHHA) has assigned hexavalent chromium a cancer risk unit factor of 0.15 $(\mu g/m^3)^{-1}$. Nickel is a carcinogen known to have chronic health effects to the cardiovascular or blood system and acute health effects to the immune system. Cadmium and lead are also classified as carcinogens. Copper, an acute TAC, affects the respiratory system. Sodium hydroxide, an acute toxic, affects the eyes, respiratory system, and skin, while sulfuric and nitric acids are both acute TACs that affect the respiratory system. Similarly, hydrochloric acid is a chronic TAC affecting the respiratory system and an acute TAC affecting the eyes and respiratory system.

Metal Finishing

The metal finishing industry is mainly comprised of small businesses that provide support for other industries that rely on the finished metal products produced at these facilities, such as automotive, computer/electronics, machinery/industrial equipment and defense/government. To meet the demand for a wide range of products, the metal finishing industry primarily utilizes two key processes, electroplating and anodizing, in addition to the other related finishing processes used such as metal stripping, bright dipping, immersion plating and paint stripping.

Businesses that conduct electroplating are commonly referred to as plating shops and are classified as either "job shops" or "captive shops". Job shops are independent operators that serve a variety of industries while captive shops are found within companies that manufacture products rather than specialize in metal plating exclusively. Captive shops typically have a higher degree of automation, due to their more predictable finishing requirements. Both job and captive shops utilize similar types of "rack and barrel" systems for their process lines, including manual hoists, hand lines, automated hoists, automated returns and reel-to-reel lines. The most common electroplating processes in job shops use decorative chromium, nickel, copper, and zinc. In captive shops, the most common metals used are decorative chromium, nickel, and zinc. The average number of process lines for plating and anodizing equipment is 4.8 for job shops and 3.1 for captive shops.

Electroplating and Anodizing

Electroplating is an electrochemical process of providing a negative electrical charge to an object while it is immersed in a metal-salt solution such that the positively charged metal ions attach to the object and form a layer of the desired metal coating. In general, the electroplating process can use any metal, though chrome, nickel, cadmium, lead, and copper are the most common. However, the choice of metal used depends on the desired finish and properties of the final product. For example, the chrome chemistry used and the time lapsed for chrome plating varies depending on the purpose or function of the finished product and the desired thickness of the chromium layer. Specifically, hard chromium plating is a process used to impart corrosion protection, wear resistance, lubricity and oil retention among other properties by depositing a thick layer of chromium (measured in thousandths of an inch) on an object over a period of hours or days. Examples of objects that are typically hard chromium plated include engine parts, industrial machinery and tools, and parts made of steel.

Alternately, decorative chromium plating is a less time consuming process used to improve the aesthetics of an object while providing a thin layer of chromium (measured in millionths of an inch) for a protective finish. Examples of decorative chromium plated parts include furniture components, bathroom fixtures, car bumpers and wheels and the process can take anywhere from a few seconds to minutes.

Anodizing, also an electrochemical process, oxidizes the metal surface of an object to produce a wear- and corrosion-resistant surface, without depositing a separate metallic layer. The difference between anodizing and electroplating is that the oxide coating is integral with the metal object or substrate as opposed to the object being coated via metallic deposition. The resulting oxidized surface is hard and abrasion resistant, and it provides some degree of corrosion resistance.

The electroplating and anodizing processes trigger a chemical reaction that causes hydrogen gas to bubble at the cathode while smaller amounts of oxygen gas bubble at the anode. These

bubbles are the primary source of pollution because they become coated with a layer of the unused TAC-containing chemical solution from the plating bath which floats to the surface as a mist. For example, during chromium electroplating, the part to be plated is submerged into a bath that contains sulfuric acid and chromic anhydride (CrO_3), also known as chromic acid. A maximum of only 20 percent of the chrome from the chromic acid is plated onto the part, thus making the remaining bath solution potentially available for coating the released hydrogen and oxygen bubbles as they break the surface of the plating bath to form a chromic acid mist. The magnitude of emissions generated from these plating processes depends on several variables, including the concentration of the solution (in this example chromic acid) used in the bath, the number of ampere-hours used during plating, the bath temperature, the bath purity and surface tension.

Within the district, there are approximately 137 facilities that conduct hexavalent chromium electroplating and chromic acid anodizing. Table 1-1 identifies the number of facilities that will be affected by PAR 1469 relative to the type of plating activity.

Table 1-1
Summary of Facilities Conducting Electroplating and Chromic Acid Anodizing Within the District

Type of Plating Activity	Number of Facilities
Decorative Chromium Electroplating	68
Hard Chromium Electroplating	34
Chromic Acid Anodizing	32
Hexavalent Chromium Electroplating and Chromic Acid Anodizing	3
Total	**137**

Overview of Current Regulatory Requirements

There are three levels of regulatory requirements that apply to TAC emissions from the metal plating industry, including the requirements proposed in PAR 1469: 1) federal requirements (i.e., Environmental Protection Agency or EPA); 2) state (i.e., California legislature); and, 3) local (i.e., SCAQMD). The SCAQMD's local efforts to specifically regulate sources of TACs from this industry have been based partly on implementing measures already adopted by EPA and the California Air Resources Board (CARB). The following is an overview of the federal and state air toxic legislation and TAC programs and the SCAQMD TAC rules that have been adopted to implement federal, state, or SCAQMD TAC reduction programs.

Federal Requirements

The federal Clean Air Act (CAA) establishes requirements to regulate emissions of air pollutants to protect human health and the environment. In addition to regulating criteria pollutants, the CAA requires the EPA to regulate TACs that have been found to adversely affect human health. Federal regulations in the CAA include the New Source Performance Standards (NSPS) under §111 and the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) under §112. The EPA periodically promulgates NSPS standards in the Code of Federal Regulations (CFR), Chapter 40, Part 60 (40 CFR Part 60) and NESHAPs in 40 CFR Parts 61 and 63. The SCAQMD has been delegated authority by EPA to implement and enforce both NSPS and NESHAP requirements. The requirements in 40 CFR Parts 60 and 61 were adopted by reference

in SCAQMD Regulations IX and X respectively. These regulations are periodically updated to maintain consistency with changes to the federal requirements.

For the metal finishing industry, there is currently no applicable NSPS standard. However, there is an applicable NESHAP for chrome plating (National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks), promulgated in 40 CFR Part 63, Subpart N. The chrome NESHAP establishes emission limits for hard chromium electroplating operations and for facilities with a cumulative rectifier capacity greater than 60 million ampere-hours per year and imposes increasingly more stringent requirements as facility mass emissions increase. For decorative chromium plating and chromic acid anodizing operations, the chrome NESHAP requires the affected facilities to meet an exhaust standard or maintain the surface tension of their plating baths at 45 dynes per centimeter or less. In addition, the NESHAP specifies numerous monitoring, recordkeeping and reporting requirements.

The TACs used in the metal finishing industry are also addressed in other federal legislation including but not limited to:

- Occupational Safety and Health Act (OSHA);
- Toxic Substances Control Act (TSCA);
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA);
- Title III of the Superfund Amendments and Reauthorization Act (SARA); and,
- Resource Conservation and Recovery Act (RCRA).

State Requirements

There are two requirements that are applicable to the metal finishing industry at the state level. The first, the Air Toxics "Hot Spots" Information and Assessment Act, was enacted in September 1987 by the California State Assembly as Assembly Bill 2588 (hereafter referred to as the AB2588 program). Under this act, certain stationary sources are required to report the types and quantities of specified toxic substances, including all of the TACs listed in Table 1-2, they release into the air. Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks. The goals of the AB2588 program are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce risk for facilities over specific emission levels.

In addition to the AB2588 program, CARB promulgated an ATCM for chrome plating to reduce emissions by establishing control requirements for new and existing hard and decorative chromium plating operations and chromic acid anodizing facilities. Overall, the requirements in the ATCM for the metal finishing industry are consistent with the requirements in the chrome plating NESHAP.

Table 1-2
TACs Used in the Metal Finishing Industry

TAC	Carcinogen?	Chronic Hazard Index?	Acute Hazard Index?	TAC Reporting Threshold in Rule 1402 (pounds/year)
Hexavalent Chromium	Yes	Yes	No	0.005
Cadmium	Yes	Yes	No	0.2
Lead	Yes	Yes	No	--
Nickel	Yes	Yes	Yes	3.3
Copper	No	Yes	Yes	500
Sodium Hydroxide	No	Yes	Yes	--
Sulfuric Acid	No	Yes	Yes	--
Nitric Acid	No	Yes	Yes	--
Hydrochloric Acid	No	Yes	Yes	--

SCAQMD Requirements

Some equipment/facilities that would be affected by PAR 1469 may also be regulated by other SCAQMD rules that focus on toxics such as Rule 1401 - New Source Review of Toxic Air Contaminants and Rule 1402 – Control of Toxic Air Contaminants From Existing Sources. Rule 1401 establishes permitting requirements for new, relocated and modified sources that emit TACs. The risk-based limits are a maximum individual cancer risk (MICR) of one in one million (1×10^{-6}) if a permit unit is not constructed with best available control technology for toxics (T-BACT) or ten in one million (10×10^{-6}) if T-BACT is used. The cancer burden or the increase in excess cancer cases in the population due to the permit unit is limited to 0.5, and the limit for noncancer acute and chronic compounds is a Hazard Index (HI) of 1.0.

The objective of Rule 1402 is to minimize public health risk from facility-wide emissions of TACs at existing facilities within SCAQMD's jurisdiction by imposing risk reduction requirements for facilities that exceed a specified action risk level. Rule 1402 establishes requirements for applicability, significant risk levels, risk assessment, risk reduction plans, implementation of risk reduction plans and progress reports. Operators of facilities subject to Rule 1402 may be required to prepare detailed inventories and, depending on their health risks, may need to prepare facility-wide health risk assessments and implement risk reduction plans. Rule 1402 establishes a significant cancer risk level at 100 in a million and an action risk level at 25 in a million. There are also non-cancer risk levels.

For existing facilities, Rule 1402 establishes reporting thresholds for hexavalent chromium, cadmium, nickel and copper. Any facility that exceeds these emission thresholds are required to submit an emissions inventory within 60 days after notification from the Executive Officer, unless a source-specific rule specifically exempts the industry from the inventory requirements. Table 1-2 summarizes the TACs used in the metal finishing industry and lists the applicable reporting thresholds pursuant to Rule 1402.

PAR 1469 PROJECT DESCRIPTION

The current version of Rule 1469 applies to hard chromium electroplating, decorative chromium plating, and chromic acid anodizing and requires facilities to meet hard chromium electroplating emission limits and to meet either an exhaust standard or plating bath surface tension limit for decorative chromium plating and chromic acid anodizing. The main purpose of amending Rule 1469 is to reduce the quantity of hexavalent chromium emissions and the associated cancer risk from the metal finishing industry by incorporating the latest amendments to the ATCM which establishes more stringent levels of control requirements for hard and decorative chromium plating and chromic acid anodizing. More stringent requirements are proposed for facilities located 25 meters or less from a sensitive receptor or residence or 100 meters or less from an existing school (kindergarten through grade 12).

Not all subdivisions in PAR 1469 contain proposed changes and for those that do, some are relatively minor changes proposed for clarity and consistency throughout the rule and with the ATCM. For simplicity, the following paragraphs summarize the major changes proposed in PAR 1469. A copy of PAR 1469 is included in Appendix A.

Applicability

This subdivision of PAR 1469 has been modified so that sellers, suppliers, users and manufacturers of kits for chromium electroplating and chromic acid anodizing will also be subject to the requirements in PAR1469.

Definitions

This subdivision of PAR 1469 has been modified to include the following new definitions applicable to chromium electroplating and chromic acid anodizing operations: "annual permitted ampere-hours," "dragout," "existing facility," "modified facility," "new facility," "school," "school under construction," and "substantial use." Also, the following definitions are proposed to be amended for clarity and consistency with the ATCM as well as other proposed changes throughout PAR 1469: "air pollution control device," "air pollution control technique," "ampere-hours," "base material," "bath component," "breakdown," "chromic acid anodizing," "composite mesh-pad system," "decorative chromium electroplating," "fiber-bed mist eliminator," "hard chromium electroplating," "modification," "packed bed scrubber," and "sensitive receptor." Also, the definitions of "area source," "large, hard chromium electroplating facility," and "medium, hard chromium electroplating facility," and "small, hard chromium electroplating facility" have been deleted for consistency with the other new requirements proposed in PAR 1469.

Requirements

Due to its large size and for improved continuity throughout the rule, subdivision (c) – Requirements of PAR 1469 has been reorganized and renumbered. For instance, the emission standards for existing, modified, and new facilities have been moved to subdivision (d) – Alternative Compliance Options and Methods. Similarly, interim emission standards for existing facilities are proposed to be moved to subdivision (e) – Performance Test Requirements and Test Methods. Since Rule 1469 is currently in effect, the requirements of paragraph (c)(1) are obsolete and have been deleted accordingly.

Housekeeping

The housekeeping paragraph (renumbered as paragraph (c)(3)) has been renamed from "Housekeeping Practices" to "Housekeeping Requirements." For consistency with the ATCM, the following changes to housekeeping requirements are proposed:

- Modifications to subparagraph (c)(4)(A) are proposed that would further define closed container storage requirements to also include any substance that may contain hexavalent chromium.
- Modifications to subparagraph (c)(4)(C) are proposed to require the immediate clean up of any spills, not just sludge, that may contain hexavalent chromium.
- Modifications to subparagraph (c)(4)(D) are proposed to require, at least once every seven days, the cleaning of storage areas, open floor area, walkways around electroplating or anodizing tanks, and any surface potentially contaminated with hexavalent chromium or that potentially accumulates dust, with either a High Efficiency Particulate Arrestor (HEPA) vacuum or a damp cloth.
- Modifications to subparagraph (c)(4)(E) are proposed to require the handling of generated chromium or chromium-containing wastes in accordance with standard hazardous waste handling practices and requirements.
- New subparagraph (c)(4)(F) is proposed to require the installation of a physical barrier, such as but not limited to plastic strip curtains, to separate buffing, grinding, or polishing areas from any electroplating or anodizing operation.
- New subparagraph (c)(4)(G) is proposed to require the separation of air compressed cleaning operations from hexavalent chromium electroplating or anodizing operations.
- New subparagraph (c)(4)(H) is proposed to minimize the dragout or release of fluids containing hexavalent chromium that adheres to parts when they are removed from a tank.

Add-On Control Requirement for Hard Chromium Electroplating Tanks

Modifications to paragraph (c)(5) are proposed that would prevent facility operators from removing, shutting down, or replacing air pollution control devices unless the replacement techniques and/or technology meets a higher control efficiency than previously achieved, or meets an emission rate of 0.0015 mg/amp-hr or less, whichever is more effective.

Modifications to paragraph (c)(6) are proposed that would relieve facility operators with an approved alternative compliance option from the requirement of installing add-on air pollution control equipment.

Training and Certification

For clarity, the training and certification requirements are proposed to be relocated from paragraph (c)(12) to paragraph (c)(7). Further, a new requirement for initial training of personnel at new facilities to be completed within a period not to exceed two years of start-up is proposed for inclusion in subparagraph (c)(7)(A).

Interim Emission Standards for Existing Facilities

Because the new emission standards for existing facilities have future compliance dates as late as 2011, modifications are proposed to subdivisions (c)(8), (c)(9), and (c)(10) that would allow operators to comply with interim emission standards. Further, the

alternative compliance option requirements for current emission standards are proposed to be relabeled throughout PAR 1469 to clearly indicate that they are only for an interim period.

Emission Standards for Existing, Modified and New Facilities

For consistency with the latest changes to the ATCM, new paragraphs (c)(11), (c)(12), (c)(13), and (c)(14) are proposed that would contain new, more stringent emission standards for existing, modified, and new chromium electroplating facilities and chromic acid anodizing facilities.

Proposed subparagraph (c)(11)(A) contains emission standards and implementation dates that are identical to those found in the ATCM for existing facilities and are summarized in Table 1-3.

Table 1-3
Hexavalent Chromium Emission Limits for Existing Tanks

Distance to Sensitive Receptor (meters)	Annual Permitted Ampere-hours	Emission Rate Limit (mg/ampere-hr)	Effective Date
≤ 100	≤ 20,000	0.01[2]	4/24/2008
≤ 100	> 20,000 and ≤ 200,000	0.0015[1]	10/24/2010
≤ 100	> 200,000	0.0015[1]	10/24/2009
> 100	≤ 50,000	0.01[2]	4/24/2008
> 100	> 50,000 and ≤ 500,000	0.0015	10/24/2011
> 100	> 500,000	0.0015[1]	10/24/2009

[1] Measured after add-on air pollution control device(s).
[2] Achieved through use of Certified Chemical Fume Suppressants. Alternatively, a facility operator may install an add-on air pollution control devices(s) that controls emissions to below 0.0015 mg/amp-hr.

Similarly, proposed subparagraph (c)(12)(A) requires that facility operators who modify their tanks to comply with an emission rate of 0.0015 milligram/ampere-hour. Subparagraph (c)(12)(B) has been added to PAR 1469 to require operators of modified facilities to conduct a facility-wide health risk assessment in accordance with the risk assessment procedures in SCAQMD Rules 1401 and 1402 and within 60 days prior to initial start-up if the actual annual hexavalent chromium emissions from the chromium electroplating or chromic acid anodizing operations are expected to exceed 15 grams per year.

For new facilities, proposed subparagraph (c)(13)(C) requires operators of tanks at new facilities to comply with an emission rate of 0.0011 milligram/ampere-hour. In addition, prior to start-up, operators of a new facility will be required to conduct and submit a health risk assessment in accordance with the risk assessment procedures in SCAQMD Rules 1401 and 1402 at least 60 days prior to initial start-up. Also, subparagraph (c)(13)(A) of PAR 1469 contains restrictions regarding the siting of new facilities such that new facilities cannot be located in an area zoned for residential or mixed uses or within 1,000 feet from the boundary of a sensitive receptor, school, school under construction, or any area zoned for residential or mixed use.

Trivalent Chromium Baths at New Facilities

Proposed subparagraph (c)(14)(B) contains requirements for new facilities that use a trivalent chromium bath to conduct a facility-wide health risk assessment in accordance with the Risk Assessment Procedures of SCAQMD Rules 1401 and 1402 to be submitted to the District within 60 calendar days prior to initial start-up.

Permit Application Submittals

For facilities that do not have a permitted annual ampere-hour limit with which to determine an applicable emission rate or facility operators with existing annual ampere-hour limits that are much higher than actual usages who opt to take a reduction in their ampere-hour limit to either continue compliance with the 0.01 mg/amp-hr emission limit, or delay the date of compliance with the 0.0015 mg/amp-hr emission limit, subparagraph (c)(15)(A) has been added to require these operators to submit permit applications and pay an application fee in accordance with SCAQMD Rule 301 – Permit Fees, for an administrative change in operating conditions. In addition, for existing facility operators installing new or modifying existing equipment necessary to comply with the new emission rates in paragraph (c)(11), subparagraph (c)(15)(B) will further require that operators submit all related permit applications to the District no later than eight months prior to the facility's applicable effective compliance date.

Alternative Compliance Options and Methods

Subdivision (d) of PAR 1469 provides operators of affected facilities alternative interim compliance options than can be utilized in lieu of complying with the emission standards contained in subdivision (c). Paragraphs (d)(1) through (d)(5) have been clarified to say that the alternative compliance options are interim and will remain in effect only until such time as the compliance dates for the new emission standards in paragraph (c)(11) become effective. In addition, new paragraph (d)(6) has been added to provide facility operators with a mechanism that would allow them to utilize an alternative compliance method to comply with the new emission standards proposed in paragraphs (c)(11) through (c)(13). The alternative compliance options would need to be enforceable as well as be able to achieve equal or greater hexavalent chromium emission and risk reductions than would otherwise be achieved by complying with the emission limits proposed in paragraphs (c)(11) through (c)(13). If approved, the alternative methods would need to be implemented within the time periods specified in paragraph (c)(11) for existing facilities and upon start-up for new and modified facilities.

Performance Test Requirements and Test Methods

For existing facility operators conducting performance tests to demonstrate compliance with the new emission standards proposed in paragraph (c)(11), paragraph (e)(1) has been clarified to say that the tests can be conducted either within 180 days after initial start-up or before the applicable compliance dates, whichever is sooner. In addition, to be consistent with the ATCM, paragraph (e)(1) has been modified to require performance tests to be conducted within 60 days after initial start-up for both new and modified facilities.

Use of Existing Performance Test

Paragraph (e)(2) has been modified to be consistent with the ATCM and would allow an existing facility demonstrating compliance with the new emission standards to use an existing performance test conducted after January 1, 2000 provided that it meets the following criteria:

1) Demonstrates compliance with the applicable emission limits of PAR 1469 (c)(11);

2) Represents currently used control methods at the time of proposed rule adoption;
3) Was conducted using one of the approved test methods specified in PAR 1469 (e)(3); and,
4) Is submitted to the District's Compliance Division by February 24, 2009.

Pre-Test Protocol

For any facility operator who conducts a performance test for existing equipment that requires no modifications, paragraph (e)(4) has been modified to require the facility operator to submit a pre-test protocol to the District's Compliance Division no later than eight months prior to the applicable effective date in paragraph (c)(11).

Emission Points Test Requirements

Paragraph (e)(5) has been modified to be consistent with the ATCM requirement that each emission point shall be tested unless a waiver is granted by the EPA. Similarly, paragraph (e)(6) has been modified to require operators of facilities operating under an alternative compliance method to also conduct and submit a performance test.

Capture Efficiency

New paragraph (e)(7) has been added to require emissions to be captured by a District-approved quantitative measurement. An example of an acceptable measurement is demonstrating that the capture system meets the design criteria and ventilation velocities specified in the American Conference of Governmental Hygienists Industrial Ventilation, A Manual of Recommended Practice. In addition, paragraph (e)(7) also contains requirements for facility operators to conduct periodic smoke tests to demonstrate each unit's capture efficiency. The smoke tests would need to be:

- Conducted initially upon start-up for new and modified facilities and within 60 days of the effective date of PAR 1469 for existing facilities;
- Conducted periodically at least once every six months and within six months of a previous test;
- Conducted under conditions representative of typical facility electroplating and/or anodizing operations; and,
- Recorded by photograph or video.

For any smoke test that demonstrates a unit's non-compliance with the capture efficiency requirement, facility operators would, upon discovery, be required to immediately shutdown all electroplating or anodizing lines associated with the affected ventilation systems until a subsequent smoke test demonstrating full compliance is achieved. The smoke test would need to be conducted using the method described in new Appendix 9 of PAR 1469, or via another SCAQMD-approved method.

Certification of Wetting Agent Chemical Fume Suppressants

For consistency with the ATCM, subdivision (f) has been modified to require certified wetting agent chemical fume suppressants to meet an emission limit below 0.01 milligrams/ampere-hour, and a surface tension limit below 45 dynes/cm if measured by a stalagmometer or below 35 dynes/cm if measured by a tensiometer.

Parameter Monitoring: Add-On Air Pollution Control Devices

The requirement in subparagraph (g)(1)(B) that an operator continuously monitor the inlet velocity pressure of a packed-bed scrubber has been expanded to also apply to other add-on air

pollution control devices such as composite mesh-pads, fiber-bed mist eliminators, and HEPA filters.

Parameter Monitoring: Wetting Agent Chemical Fume Suppressants
For facilities operating under an approved alternative compliance method and that use chemical fume suppressants for partial or complete control of hexavalent chromium emissions, subparagraph (g)(2)(B) has been modified to comply with the ATCM by requiring daily surface tension monitoring and measurements

Inspection and Maintenance Requirements
To comply with the ATCM for custom designed add-on air pollution control devices, subdivision (h) has been modified to require facility operators to develop operation and maintenance requirements and submit these requirements for District review and approval.

Recordkeeping: Monitoring Data Records
Subparagraphs (j)(4)(B) and (j)(4)(C) have been modified to require daily recordkeeping of pressure drop and inlet velocity pressure data.

For consistency with the ATCM, clause (j)(4)(D)(ii) has been modified to require daily recordkeeping of the surface tension of the electroplating or anodizing bath for facilities that operate under an approved alternative compliance method and that use chemical fume suppressants as all or partial control of hexavalent chromium emissions.

Recordkeeping: Records Demonstrating Facility Size
Since there is no relevance or meaning to demonstrating a facility's size relative to the quantity of emissions, paragraph (j)(7) has been deleted.

Recordkeeping: Records of Filter Purchase and Disposal
New subdivision (j)(10) has been added that will require a facility operator to retain purchase orders for filters and waste manifest records for filter disposal as a result of operating add-on air pollution control devices.

Reporting: Initial Compliance Status Report
Subparagraph (k)(2)(A) has been modified so that it will: 1) have identical timelines regarding the submittal of initial compliance status reports (ICSR) for existing facilities; and 2) require new facilities as of October 24, 2007 to submit the ICSR upon start-up.

Reporting: Notification of Compliance Status for Sources Currently Using Trivalent Chromium
Subparagraph (k)(5)(A) has been modified so that it will have identical timelines regarding notification of compliance status (NOCS) submittals for existing facilities as of October 24, 2007. For facilities existing as of October 24, 2007, facility operators will have to submit the NOCS within 30 days after the effective date of PAR 1469.

Chromium Electroplating or Chromic Acid Anodizing Kits Requirements
To be consistent with the ATCM, new subdivision (q) has been added to ban the use, sale, supply, offer for sale, or manufacture for sale of any chromium electroplating or chromic acid anodizing kit in California.

Appendix 1 – Content of Performance Test Reports

Item number 4 has been clarified to specify that the results of performance test reports pursuant to subdivision (e) should be in units of milligrams/ampere-hour.

Appendix 2 – Content of Initial Compliance Status Reports

- Item number 2 has been clarified to specify that commercial/industrial and sensitive receptor distances can be derived from measurement methods in subparagraph (c)(11)(B).
- New item number 9 has been added to require applicable facilities to submit the test report for the initial smoke test demonstrating the capture efficiency of ventilation systems.
- Item number 10 has been clarified to say that hazardous air pollutants emitted by the source should be quantified in pounds.
- Item number 14 has been deleted since determining a facility's size has no reference or meaning in PAR 1469.
- New item number 15 has been added to require a facility operator to report the actual cumulative ampere-hour usage expended during the preceding calendar year if operations occurred during that year.
- New item number 16 has been added to require a statement that the owner or operator, or personnel designated by the owner or operator, has completed a District-approved training program pursuant to the requirements in paragraph (c)(7).

Appendix 3 – Content of Ongoing Compliance Status Reports

- Item number 8 has been modified to require reporting of hexavalent and trivalent chromium "emissions data" rather than "throughput data." The amount reported is also required to be in "grams" rather than "pounds".
- Item number 9 has been modified to provide sensitive receptor locations rather than distances from the facility. A statement has also been added that would require measurements to be made by using methods specified in subparagraph (c)(11)(B).
- New item number 13 has been added to require compliance and emission reports to contain the results from periodic smoke tests that are conducted during the reporting period to demonstrate the capture efficiency of the ventilation system(s).
- New item number 15 (PAR 1469) has been added to require a statement that the owner or operator, or personnel designated by the owner or operator, has completed a District-approved training program pursuant to the requirements in paragraph (c)(7).

Appendix 8 – Information Demonstrating an Alternative Method(s) of Compliance Pursuant to Paragraph (d)(6)

New Appendix 8 has been added to establish criteria for the owner or operator of a facility applying for approval of an alternative method of compliance.

Appendix 9 – Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of Add-on Air Pollution Control Devices Pursuant to Paragraph (e)(7)

This appendix has been added to establish smoke test methods for demonstrating capture efficiency for ventilation systems of add-on air pollution devices.

PAR 1469 METHODS OF COMPLIANCE

To comply with PAR 1469 and subsequently reduce the quantity of chromium emissions from electroplating and anodizing operations, operators of each facility will need to determine the

appropriate compliance method based on the type of plating operation(s) and equipment configurations and whether or not air pollution control equipment is currently in place or required. There are five main ways for a facility to comply with PAR 1469: 1) mechanically suppressing mists at the surface of the tank; 2) suppressing fumes via the use of chemical fume suppressants; 3) venting tanks to new or modified air pollution control equipment; and, 4) replacing current operations with pollution prevention techniques (i.e., using alternative processes to hexavalent chrome plating). The following subsections discuss each of the potential methods for complying with PAR 1469.

Mist Suppression at Tank Surface

Applicable to both electroplating and anodizing, mist suppression is a low-cost, zero-energy, first-step method of suppressing heavy metal-bearing aerosols before they become entrained in ventilation air. Mist suppression or the act of minimizing the production of aerosols or wet particulates containing chrome and other heavy metals from escaping the metal plating or anodizing tanks can be accomplished by adding polyethylene balls, commonly referred to as polyballs. Polyballs are usually used in combination with a foam blanket to cover the wet surface of the bath. The layer of floating polyballs acts as a barrier that blocks mist from escaping above the tank surface. Tanks using polyballs remain fully functional with respect to work piece submergence and removal. The control efficiency of polyballs minimizes the generation of wet particulates from 50 to 80 percent.

Chemical Fume Suppressants

Another approach to reducing or suppressing chrome-laden mist or fumes at the surface of plating and anodizing baths is through the use of chemical fume suppressants. There are two basic types of chemical fume suppressants: wetting agents (surfactants) and foam blankets. A wetting agent chemical fume suppressant contains a surfactant, so that when it is added to a tank, the surface tension of the plating bath is lowered and the quantity of mist produced is reduced. The most common surfactant-based fume suppressants are fluorinated or perfluorinated because fluorine adds stability over a wide range of operating parameters and plating bath chemistries. Typically, wetting agent chemical fume suppressants can reduce emissions by 95 to 99 percent or more, depending on the surface tension of the plating bath.

The second type of chemical fume suppressant, foam blanket fume suppressants, control tank emissions differently from wetting agents. Instead of inhibiting the formation of mists, foam blanket fume suppressants create a foam layer that covers the surface of the bath and physically traps any mist that would otherwise be released. Foam blankets are initially generated from the agitation that occurs when the hydrogen and oxygen bubbles are generated during the plating process. In general, the effectiveness of the foam blanket is dependent on maintaining optimal blanket thickness which is typically in the range of 0.5 inch to one inch. If the foam blanket is too thin, the mists will not be adequately contained and if it becomes too thick, hydrogen gas will get trapped and an extremely dangerous potential explosion hazard will result. On average, foam blanket fume suppressants are expected to reduce emissions by approximately 70 percent.

Table 1-4 contains a list of both wetting agent and foam blanket chemical fume suppressants whose control efficiencies have been approved by EPA.

Table 1-4
Approved Control Efficiencies for Chemical Fume Suppressants

Chemical Fume Suppressant (Brand Name)	**Type of Chemical Fume Suppressant**	**Type of Metal Plating Activity**	**Control Efficiency** (%)
Fumetrol 101	Foam Blanket	Hard	95%*
Fumetrol 140	Wetting Agent	Decorative; Hard; & Anodizing	99%
Foam-Lok L	Foam Blanket	Hard	95%*
Harshaw MSP-ST	Wetting Agent	Anodizing	95%
Dis-Mist NP	Wetting Agent	Decorative	99%
Zero-Mist Liquid	Wetting Agent	Decorative	99%

* This control efficiency is achieved with the combined use of chemical fume suppressant with polyballs.

Air Pollution Control Equipment

There are four types of air pollution control equipment available and currently in use for reducing emissions from metal plating and anodizing operations. They are HEPA filters, mist eliminators (mesh pad and chevron types), wet packed bed scrubbers, and totally enclosed tanks. The following discussion summarizes each type of control technology.

HEPA Filters

If one or more plating or anodizing tanks are connected to a ventilation system consisting of ductwork and blowers, the air can be routed to a series of filters to capture the dry toxic particulate emissions produced during metal finishing activities. The first filter or prefilter is designed to collect the larger particles entrained in the air stream and to prevent clogging of the filter system overall and to increase the longevity of the HEPA filter. After the prefilter, the air stream is routed through one or more HEPA filters, which are capable of trapping the smaller toxic particles associated with metal plating and anodizing activities. A HEPA filter is capable of collecting fine particles as small as 0.3 µm in diameter at an efficiency of 99.97 percent or greater.

The HEPA filter design consists of a pleated construction, which is similar to other filter designs available, but it is unique because the filter media is denser to capture smaller particles. HEPA filters are generally limited to handle airflow with an ambient temperature up to approximately 100 degrees Fahrenheit (^{O}F), though special applications for higher temperatures are available. However, since the temperatures of most plating and anodizing baths are well within the ambient temperature limit, most HEPA filters should be suitable for this type of application. In addition, with respect to maintenance, unlike other less efficient filter systems, HEPA filters are not automatically cleaned. When one HEPA filter element becomes loaded with particulate matter, it needs to be manually changed and disposed of as hazardous waste.

Mist Eliminators

There are two kinds of mist eliminators used to collect wet toxic particulates entrained in the air collected by tank ventilation systems, mesh pad and chevron type. A mesh pad resembles a screen that is made up of multiple layers of a fine woven plastic filament. As the exhaust air flows through the ventilation system towards the mesh pad, the wet droplets impact the mesh pad and fall out of the exhaust stream. The ability of a mesh

pad to remove the wet particulates from the exhaust stream is dependent upon the particle size, air velocity as it travels through the ventilation system, the filament diameter of the mesh pad, the orientation and depth of the mesh pad(s) relative to the direction of the air flow. Mesh pads are capable of collecting fine particles as small as 5.0 µm in diameter.

In a typical arrangement, a mesh pad mist eliminator serves a single plating tank and is installed inside the ventilation system. The cross sectional area of the exhaust duct is increased by the unit, which reduces the velocity of the exhaust stream and allows the wet particulates to adhere to the mesh pad. Removal efficiency is increased by adding multiple stages of mesh pads. The pads are periodically washed down and the collected plating solution is returned to the plating bath.

Because of their design, mesh pads are ideal for chemical recovery purposes and for preventing corrosion of the ventilation system, especially for tanks that contain a caustic bath solution. Mesh pads are also used for controlling air pollutant emissions when used in combination with a wet packed bed scrubber system to remove wet particulates entrained in the tank exhaust air stream. However, a mesh pad cannot be used for both purposes when there are multiple exhaust streams (i.e., several tanks using multiple tank chemistries) directed to one or more mist eliminators. In this case, the wet particulates will be captured, but the chemicals cannot be recovered for reuse for future metal finishing activities.

A chevron mist eliminator contains several baffles that are arranged in a chevron or 'zigzag' pattern. As the mist-laden air travels through the device, it impacts the baffles and is forced to make several abrupt changes in direction between the entry and exit points of the mist eliminator. Since the wet particulates or mist droplets are much heavier than air molecules, they have too much linear momentum to make sharp turns without impacting a baffle. Each change in direction of the air flow forces the wet particulates to impact the baffles and drop out of the exhaust stream. Eventually a liquid film builds up on the baffles, large droplets coalesce and return to the metal finishing tank for reuse, thus, making the placement of a chevron mist eliminator at the exhaust point of a tank vent ideal for conserving process tank solutions. In addition, like mesh pad units, a chevron mist eliminator may also be used in combination with a wet packed bed scrubber to prevent excessive emissions of wet particulates.

Wet Packed Bed Scrubber

A wet packed bed scrubber is a device that forces air laden with wet particulates through a vertical column or bed filled with non-corrosive plastic packing media. Exhaust air from a plating or anodizing tank line enters at the bottom of the scrubber and exits at the top. As the air passes through the column, the wet particulates are impinged onto the packing media which is regularly sprayed with a scrubbing solution. Subsequently, the wet particulates are dissolved into the scrubbing liquor. Typically, the scrubbing solution is pumped from a reservoir at the base of the scrubber and sprayed down into the packing from the top, in a counter-current flow. Plugging of the nozzles or too high of an acid concentration of the scrubbing solution can adversely affect the efficiency of the scrubber. To prevent these effects, some portion of the scrubbing solution is regularly purged and replaced with clean water. The purged solution is either sent to a pretreatment system for recovery or disposed of as hazardous waste. In addition, to increase removal efficiency, any wet particulates remaining in the exhaust air stream flow

through a dewatering or demisting stage after the packed bed. Wet packed bed scrubbers can achieve high pollutant removal efficiencies, ranging from 90 to 98 percent depending on flow, residence (contact) time, and solution freshness.

Totally Enclosed Tanks

This technology, which is applicable only to hard chromium plating and chromic acid anodizing, uses a hinged tank cover to form a completely sealed system that contains chromic acid emissions within the enclosed tank area. Hydrogen gas and oxygen resulting from the plating process is vented through membranes in the cover. The membranes are sized to prevent passage of chromic acid mist or water vapor. While the cover is closed and after plating is completed, any chromic acid vapors lingering in the headspace between the cover and the tank surface will dissipate back into the tank after several minutes or the vapors can be evacuated through a small cartridge filter. Though the control efficiency is reported to be 100 percent, the applicability of this technology is limited to plating or anodizing activities that do not require an operator to closely monitor or interrupt the process to check on the product prior to completion of the metal finishing task.

In summary, to comply with PAR 1469, the appropriate type of air pollution control device depends on the desired product finish as it corresponds to the applicable plating or anodizing process, the chemistry of the metal finishing, and the operational needs of an affected facility. Table 1-5 summarizes the air pollution control devices with respect to their approximate control efficiencies.

Table 1-5
Summary of Air Pollution Control Devices Used for Metal Plating

Control Technology	**Substance Type Controlled**	**Control Efficiency** (%)
HEPA filter (with prefilter)	Dry particulates	99.9 - 99.99 %
Mist suppression via Polyballs	Aerosols (wet particulates)	50 - 80* %
High-efficiency mist eliminator	Aerosols (wet particulates)	99 - 99.9 %
Wet packed bed scrubber	Aerosols (wet particulates)	90 - 98 %

*This is a first stage control that is meant to be used in conjunction with another control device such as a wet packed bed scrubber or a mist eliminator.

Pollution Prevention

Emission reductions of hexavalent chromium and other metal finishing compounds can be achieved by implementing pollution prevention techniques such as using alternative plating processes or implementing process changes. Whenever feasible, replacing hexavalent chromium or other metals in plating activities with less toxic or non-toxic alternatives will have a net effect of reducing emissions from this industry. There are several processes that are potential alternatives to certain plating activities. However, the alternatives are not necessarily a universal solution for the entire plating industry because of the extensive specifications for each product being fabricated. For example, the features of each alternative vary by parameters such as quality of finish, durability, hardness, abrasion and corrosion resistance, heat sensitivity, wear, size and shape of the product, and cost. The following discussion contains brief overviews highlighting some of the advantages and disadvantages of the various alternatives to hexavalent chrome plating and chromic acid anodizing. These alternatives pertain to compliance with PAR 1469 and pollution prevention that could voluntarily be implemented for other metal plating.

Trivalent Chrome Plating

The use of trivalent chromium in decorative applications has been proven to be a limited, but successful alternative for hexavalent chrome plating when finish thicknesses are required to be no greater than 0.1 millimeter (mm). Thicker finishes tend to cause problems with cracking and palling, so trivalent chromium is not considered a suitable replacement for hard chromium plating finishes, which are typically at least 20 mm thick. The following summarizes the advantages of trivalent plating over hexavalent chrome:

- Lower Concentrations of Metal – Metal concentrations of trivalent plating baths are typically lower than hexavalent chrome baths, which results in less quantities of hazardous waste to be treated, hauled away and disposed of as sludge, resulting in lower waste treatment costs overall.
- No Reduction Step – Because wastes containing hexavalent chrome must first be reduced or converted to trivalent chromium before disposal, large quantities of chemicals such as sulfur dioxide, metabisulfite or sodium borohydride are used for the conversion process. For example, three pounds of sodium metabisulfite are required for each pound of chromic acid converted to trivalent chrome. Therefore, with trivalent chrome plating eliminating the reduction step, the need for the additional chemicals plus the equipment and labor costs associated can also be eliminated.
- Higher Rack Densities – Rack density refers to the number of items that can be attached to the rack for submersion into a plating bath at any one time while maintaining a high quality finish. Trivalent chromium plating allows 15 percent more items than hexavalent chrome.
- Lower Current Density – For lower current flow, the trivalent chrome process can utilize less expensive racks with inexpensive drawn copper wire hooks in lieu of the more expensive custom parts racks used for hexavalent chrome plating.
- Fewer Rejects – The 'throwing power' or the ability of trivalent chrome to plate evenly and consistently is higher than for hexavalent plating, which reduces the number of rejected or improperly plated parts.
- Reduced Dragout – Because a trivalent bath solution is less viscous than hexavalent bath solutions, less plating solution clings to the parts when they are removed from the bath, resulting in lower costs for waste treatment and makeup chemicals.
- No Fumes – Unlike hexavalent plating, trivalent plating does not produce chromic acid fumes which are highly corrosive and present a potential health hazard to personnel and the surrounding environment.

Despite the many benefits to using the trivalent chrome process in place of hexavalent chrome, the main barrier for converting is customer acceptance because the color tones of the trivalent deposit are darker overall and the resulting finish is not as shiny. However, recent developments in new bath additives for the trivalent chrome processes have improved the finish so that it more closely resembles the look of hexavalent chrome. Also, the trivalent chromium process has a slightly higher cost and requires more careful control of plating conditions.

Electroless Nickel Phosphorous

The process of electroless nickel plating from conventional hypophosphite solutions has been considered as an alternative to using hexavalent chrome. However, its usefulness is limited due to the slightly poorer physical properties of the finish such as reduced hardness and abrasion resistance. The corrosion-resistance and wear properties are

dependent upon the phosphorous content of the bath, which ranges from one to 12 percent.

As an alternative to hypophosphite solutions, electroless nickel deposits from borohydride solutions have shown better wear, lower friction, and improved hardness, though heat treatment is required to achieve full hardness. The electroless nickel process bath is more sensitive to impurities than the chrome plating bath. As a result, it must be monitored closely to maintain the proper concentrations and balance of the metal ions and reducing agents. In addition, the bath life is finite and requires frequent disposal and replenishment, especially for applying thick deposits. Deposition rates and coating properties are affected by temperature, pH, and metal ion-reducing agent concentrations.

As compared to hexavalent chromium, an advantage of electroless nickel plating is that it produces an even, albeit brittle, deposit over the contours of the substrate without producing excess buildup at the edges and corners. Thus, the need to overplate would be eliminated. However, if grinding is necessary to even out the nickel deposit, the brittle quality of the nickel layer may make it difficult to grind if the deposit layer is thick. Based on this and previously mention drawbacks, deposits of electroless nickel have limited industrial applications (e.g., for ground-based hydraulic component use), but it cannot be plated as cost effectively as hexavalent chrome.

Nickel-Tungsten Electroplating

There are two relatively new nickel tungsten-based electroplating processes available as potential alternatives to chrome plating: 1) nickel-tungsten boron (Ni-W-B); and, 2) nickel-tungsten silicon carbide composite (Ni-W-SiC). Both processes are electrolytic and deposit a coating of nickel and tungsten. The presence of small amounts of either boron or silicon carbide enhances the properties of the deposited coating.

A plating solution of nickel-tungsten-boron is mildly alkaline and far less toxic than chromium. It is reflective with an appearance similar to chromium, bright silver, or bright nickel. In addition, the coating has favorable chemical and abrasion resistance, high ductility, a low coefficient of friction, and a uniform finish. Unlike most metals that exhibit a crystalline structure at ambient temperatures, the alloy is structureless so that the plate replicates the appearance of the substrate. For instance, if the substrate has a bright appearance, so will the finish, but if the substrate is etched or patterned, the plated work piece will appear etched.

The nickel-tungsten silicon carbide composite technology has been patented by Takada Incorporated to replace hard chromium coatings. Nickel-tungsten silicon carbide is similar to nickel-tungsten-boron, except that it uses silicon carbide particles interspersed in the matrix to relieve internal stress and improve coating hardness. Nickel and tungsten ions become absorbed on the suspended silicon carbide particles in the plating solution. The attached ions are then adsorbed on the cathode surface and discharged. The silicon carbide particle becomes entrapped in the growing metallic matrix.

The nickel-tungsten silicon carbide process has several advantages over hard chromium plating including higher plating rates, higher cathode current efficiencies, better throwing power, and better wear resistance. The main disadvantage of this process is its susceptibility to metallic and biological contamination. Much is still unknown about this

process including its susceptibility to hydrogen embrittlement, fatigue, and corrosion as well as its maximum finish thickness, lubricity, grinding characteristics, and facility requirements.

Both alternatives use less energy to operate the rectifiers and heaters, resulting in reduced energy costs when compared to hexavalent chrome plating. Like electroless nickel plating, the deposits are more uniform than chrome which in turn increases plating line throughput and reduces the rate of rejection. The nickel-tungsten electroplating process produces many of the same desirable physical properties as chrome plating, but it isn't commonly used because additional performance testing is needed. The major disadvantages of nickel-tungsten electroplating are the reliance on nickel and the potential increase in chemical costs.

Tin-Cobalt Alloy

Tin-cobalt alloys provide a finish that is similar in appearance to chromium. The tin-cobalt appearance ranges in color from a bright, chromium appearance to a warm, silvery gray color. Color is controlled by varying the percent of tin in the alloy. To achieve the appearance of a chromium plate, the optimal tin-cobalt ratio in solution is 50:50. This ratio results in a plate that consists of 80 percent tin and 20 percent cobalt. Reducing the cobalt content of the plate below 17 percent results in a matte gray appearance. Additional operating parameters include a pH of approximately 8.5 and an operating temperature ranging between 38 and 43 degrees Celsius. The tin-cobalt finish provides hardness and wear-resistance that is sufficient for most indoor, decorative applications. The process, either in rack or barrel operations, uses an alkaline sulfate system with optional wetter/amine-based liquid brighteners. Current applications of this plating alternative for chromium include automotive interior parts, computer components, bicycle spokes, flexible shower hoses, and screws.

Tin-Nickel Alloy

Tin-nickel alloy plating results in a faint rose pink color and can be used as a replacement for decorative chromium plating for both indoor and outdoor applications. This alloy is resistant to corrosion and tarnish and has good contact and wear resistance. The hardness of a tin-nickel deposit ranges between chromium and nickel. Other advantages of this coating include excellent frictional resistance and ability to retain an oil film on its surface. Tin-nickel alloy plating solutions have a high throwing power, which enables the solution to function where plating chromium in deep recesses is a problem.

Aluminum Ion Vapor Deposition

Ion vapor deposition (IVD) produces a multi-purpose coating that has excellent corrosion protection and no embrittlement problems. This technology has been used as an alternative to chromium coating in several applications. Extensive testing has shown that IVD aluminum protects substrates better than electroplated or vacuum-deposited chromium in acetic salt fog and outdoor environments. IVD also provides greater resistance to cracking.

Type II Sulfuric Acid Anodizing

The results of a National Aeronautics and Space Administration (NASA) study indicate that in applications where anodizing is used to impart corrosion protection on aluminum, Type II sulfuric acid anodizing is superior to Type I chromic acid anodizing.

Chemical suppliers claim that converting from chromic acid anodizing to sulfuric acid anodizing is not a simple chemical substitution. Instead, the process requires a complete change of the anodizing equipment with partial modifications to downstream waste treatment facilities. Due to the differences in the acidity levels of sulfuric acid and chromic acid, replacement of the anodizing tank is typically required. Further, sulfuric acid anodizing processes also have different voltage and amperage requirements, necessitating replacement of the rectifier. The operating temperature of the electrolytic bath is different for the two processes such that the chromic process is steam heated and maintained at an operating temperature ranging between 90 and 100 ^{o}F, whereas the sulfuric acid process is chilled with cooling water to an operating temperature ranging between 45 and 70 ^{o}F.

Operation and maintenance costs tend to be much lower for sulfuric acid anodizing than for chromic acid because of lower energy requirements. Wastewater treatment costs are also lower because the sulfuric acid process only requires the removal of copper, whereas chromic acid requires more complex chrome reduction techniques. The change in materials also means that the cost of sludge disposal is greatly reduced.

Table 1-6 summarizes the several alternative processes to hexavalent chromium electroplating. Each of the alternatives may have limited application, but are potential strategies available to facilities to reduce hexavalent chromium emissions from the metal finishing industry.

Table 1-6
Summary of Alternative Processes *

Alternative Process	Advantages	Disadvantages
Trivalent Chromium (Cr+3)	• Nontoxic • Lower concentrations needed • Less chemicals used – less waste • No fumes • Higher throughput of final product	• Less durable finish than Cr+6 • Color difference • Limited to decorative applications
Electroless Nickel Phosphorus	• Less toxic • More uniform finish than Cr+6 • No need to overplate • Appropriate for use in ground-based hydraulic components	• Lower hardness & abrasion resistance • May require heat treatment for hardness • Process bath sensitive to impurities
Nickel-Tungsten Electroplating	• Less toxic • More uniform finish than Cr+6 • Lower energy costs than Cr+6	• Potentially higher chemical costs
Tin-Cobalt Alloy	• Less toxic • Similar finish to Cr+6 • Appropriate for indoor decorative applications	• Lower hardness & wear resistance
Tin-Nickel Alloy	• Less toxic • Hardness between chromium & nickel • Good corrosion & tarnish resistance • Good wear resistance • Appropriate for indoor & outdoor use	• Limited to decorative applications
Aluminum Ion Vapor Deposition (IVD)	• Less toxic • Excellent corrosion resistance • Appropriate for outdoor use • Good resistance to cracking	• Extremely expensive • Likely for highly specialized military or commercial aerospace applications

*The alternative processes identified in this table may be considered pollution prevention techniques for chrome and other metals.

CHAPTER 2 - ENVIRONMENTAL CHECKLIST

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Environmental Checklist and Discussion

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's potential adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Proposed Amended Rule 1469 – Hexavalent Chromium Emissions From Chromium Electroplating and Chromic Acid Anodizing Operations
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
CEQA Contact Person:	Ms. Barbara Radlein (909) 396-2716
Rule 1469 Contact Person	Ms. Cheryl Marshall (909) 396-2567
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive, Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	The objective of PAR 1469 is to further reduce the quantity of hexavalent chromium emissions and the associated cancer risk from the metal finishing industry by incorporating the latest amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations, as adopted by the California Air Resources Board (CARB) on October 24, 2007. For example, facility operators will be required to comply with a hexavalent chromium emission rate of 0.0015 milligram per ampere-hour (mg/amp-hr) for modified facilities and 0.0011 mg/amp-hr for new facilities. In addition, PAR 1469 would prohibit siting and constructing new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses. Other changes are proposed that include: 1) a broader definition of sensitive receptor; 2) more stringent surface tension requirements for certifying fume suppressants; 3) more stringent housekeeping practices; and, 4) a prohibition of sale, supply, or manufacture of chromium electroplating or chromic acid anodizing kits to unpermitted facilities. Other minor changes are proposed for clarity and consistency throughout the rule. PAR 1469 is estimated to reduce hexavalent chromium emissions by 40 percent, resulting in a reduction of cancer risk for most chrome plating facilities to less than 25 in a million. The environmental analysis in the Draft EA concluded that PAR 1469 would not generate any significant adverse environmental impacts.
Surrounding Land Uses and Setting:	Not applicable
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with a "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

☐ Aesthetics	☐ Agriculture Resources	☑ Air Quality
☐ Biological Resources	☐ Cultural Resources	☑ Energy
☐ Geology/Soils	☑ Hazards & Hazardous Materials	☑ Hydrology/ Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☑ Solid/Hazardous Waste	☑ Transportation/ Traffic	☑ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☑ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: October 8, 2008 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor

ENVIRONMENTAL CHECKLIST AND DISCUSSION

Because the objective of PAR 1469 is to further reduce the cancer risk associated with hexavalent chromium emissions from the metal finishing industry by establishing additional, more stringent requirements for chrome plating and chromic acid anodizing processes, PAR 1469 is expected to reduce the cancer risk for most chrome plating facilities to less than 25 in one million (25×10^{-6}). Specifically, PAR 1469 would supplement the current emission limit requirements for chrome plating pursuant to the NESHAP promulgated in 40 CFR Part 63, Subpart N, National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, by reducing the cancer risk at most of the affected facilities to below 25 in one million (25×10^{-6}). The responses to the following checklist items focus on the assumption that mechanical and chemical fume suppressants and add-on control equipment (i.e., HEPA filtration systems) would be used to comply with the requirements of PAR 1469, depending on the specific type of metal finishing operation being controlled.

It is important to note that the basis for estimating the number of HEPA filtration systems, the number of HEPA filters needed, and the projected usage of chemical fume suppressants was derived from a combination of facility data with worst-case assumptions, when actual data were not available. Thus, the estimates are conservative to the extent that the actual numbers of add-on controls and fume suppressant usage are expected to be less than the calculated amounts. Further, the availability of alternative compliance options in PAR 1469 is also expected to further reduce the actual number of add-on controls below the calculated values analyzed in this document. It is important to note that there are 82 facilities that already comply with the requirements in PAR 1469 and therefore, will not need to install add-on pollution control equipment. Thus, these facilities are excluded from the analysis of indirect impacts resulting from the installation of air pollution control equipment.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
I.	**AESTHETICS.** Would the project:			
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☑
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☑
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑

Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

Discussion

I.a), b), c) & d) The proposed project would regulate chromium emissions from approximately 65 chromium electroplating and chromic acid anodizing facilities throughout the District. For affected facilities that do not currently meet the more stringent rule requirements, the expected options for compliance are the use of mechanical and chemical fume suppressants and add-on control equipment (i.e., HEPA filtration systems).

The proposed project would not result in any new construction of buildings or other structures that would obstruct scenic resources or degrade the existing visual character of a site, including but not limited to, trees, rock outcroppings, or historic buildings. Similarly, additional light or glare would not be created which would adversely affect day or nighttime views in the area since no light generating equipment would be required to comply with PAR 1469. Further, any installation of HEPA filtration systems at the existing facilities, either inside or outside the existing building(s), would not appreciably change the visual profile of the affected building(s).

Based upon these considerations, significant adverse aesthetics impacts are not anticipated and will not be further analyzed in this Draft EA. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
II.	**AGRICULTURE RESOURCES.** Would the project:			
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☑
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☑
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☑

Significance Criteria

Project-related impacts on agricultural resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

Discussion

II.a), b), & c) The proposed project would regulate chromium emissions from approximately 65 chromium electroplating and chromic acid anodizing operations throughout the District. For affected facilities that do not currently meet the more stringent rule requirements, the expected options for compliance are the use of mechanical and chemical fume suppressants, and add-on control equipment (i.e., HEPA filtration systems).

The proposed project would not result in any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Further, any installation of HEPA filtration systems at the existing facilities, either inside or outside the existing building(s), would not require converting farmland to non-agricultural uses because equipment would be installed completely within the confines of an affected industrial facility's boundaries.

Based upon these considerations, significant agricultural resource impacts are not anticipated and will not be further analyzed in this Draft EA. Since no significant agriculture resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
III. AIR QUALITY. Would the project:			
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☑	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☑	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☑	☐

		Potentially Significant Impact	Less Than Significant Impact	No Impact
e)	Create objectionable odors affecting a substantial number of people?	☐	☑	☐
f)	Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	☐	☐	☑

III.a) PAR 1469 is being implemented to incorporate the latest amendments to the ATCM and to further reduce chromium emissions and the cancer risk from chromium electroplating and chromic acid anodizing operations. Although the proposed project does not implement control measures in the SCAQMD's AQMP, PAR 1469 does, however, implement CARB's ATCM for chromium electroplating and chromic acid anodizing operations. In addition, the proposed project is consistent with the air quality improvement goals of the AQMP because it is expected to contribute to the overall improvement of localized air quality by reducing TAC emissions and the cancer risk from affected facilities. Some TAC emissions at affected facilities are also considered to be comprised of particulate matter (PM) emissions and, as such, PAR 1469 would also contribute to reducing PM emissions. Therefore, implementing PAR 1469 is a beneficial effect such that it will not be further analyzed in this Draft EA.

III.b) & c) The objective of the proposed project is to reduce hexavalent chromium emissions and exposure to hexavalent chromium from chromium electroplating and chromic acid anodizing operations. However, the implementation of PAR 1469, with respect to the use of chemical fume suppressants and add-on controls could create both direct and indirect air quality impacts. These impacts are discussed separately as follows.

Air Quality Significance Criteria

To determine whether or not air quality impacts from adopting and implementing the proposed amendments are significant, impacts will be evaluated and compared to the criteria in Table 2-1. The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

Direct Air Quality Impacts

PAR 1469 is estimated to reduce the cancer risk at most of affected facilities to below 25 in one million (25×10^{-6}). Based on an evaluation of inventories of facilities that would be subject to PAR 1469, the universe is comprised of about 137 facilities with a total of 271 tanks distributed as follows: 1) 34 facilities with 130 hard chromium tanks; 2) 68 facilities with 84 decorative chromium tanks; 3) 32 facilities with 38 chromic acid anodizing tanks; and, 4) three facilities that conduct multiple plating operations with 12 hard chromium tanks, three decorative chromium tanks, and four chromic acid anodizing tanks. Further, approximately 68 facilities with 102 tanks will be required to meet a minimum emission limit of 0.0015 mg/amp-hr, distributed as follows: 1) 9 facilities have 29 hard chromium tanks; 2) 38 facilities have 45 decorative chromium tanks; 3) 20 facilities have 24 chromic acid anodizing tanks; and 4) one facility conducts multiple chromium electroplating processes with three decorative chromium electroplating tanks and one chromic acid anodizing tank. There are 12 facilities with 23 tanks vented to 13 existing air pollution control devices that may need to be redesigned or upgraded to

Table 2-1

Air Quality Significance Thresholds[6]

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants and Odor Thresholds		
Toxic Air Contaminants (TACs) Accidental Release of Acutely Hazardous Materials (AHMs)	MICR $\geq$ 10 in 1 million ; HI $\geq$ 1.0 (project increment) CAA §112(r) threshold quantities	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [(a)]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu g/m^3$ (construction) [(b)] & 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$ 20 $\mu g/m^3$	
PM2.5 24-hour average	10.4 $\mu g/m^3$ (construction) [(b)] & 2.5 $\mu g/m^3$ (operation)	
Sulfate 24-hour average	1 ug/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

(a) Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

(b) Ambient air quality threshold based on SCAQMD Rule 403.

KEY: MICR = maximum individual cancer risk; HI = Hazard Index; ug/m^3 = microgram per cubic meter; ppm = parts per million; AHM = acutely hazardous material; TAC = toxic air contaminant

meet the more stringent emissions limits in PAR 1469. In addition, there is one facility with 13 enclosed hard chromium tanks that may need redesigned or upgraded controls in order to meet the 0.0015 mg/amp-hr limit. The remaining 55 facilities with 66 tanks currently only have in-tank controls and may need to install approximately 56 air pollution control systems in order to

[6] CEQA Air Quality Handbook, SCAQMD, November 1993.

meet the 0.0015 mg/amp-hr limit. Consequently, reducing the cancer risk at the majority of these facilities will provide an air quality benefit and public health benefit.

Direct air quality impacts of amending PAR 1469 would result from the reduction of the risk levels. Lowering toxic risk at affected facilities will provide air quality and human health benefits to the public, such as reducing cancer and non-cancer risks.

Indirect Air Quality Impacts

The installation and operation of add-on air pollution control equipment and the use of chemical fume suppressants can potentially create secondary or indirect air quality impacts (e.g., emissions), which can adversely affect local and regional air quality. A project generates emissions both during the period of its construction and through ongoing daily operations. During installation of new add-on air pollution control devices, emissions may be generated by onsite construction equipment and by offsite vehicles used for worker commuting. After construction activities are completed, emissions may be generated by the operation of the add-on air pollution control devices, emissions generated from the use of chemical fume suppressants, or a combination of the two.

Assumptions Based on Incremental Number of Add-on Pollution Control Equipment

An affected facility operator may opt to install add-on air pollution control equipment in order to achieve the applicable emission limit or to meet the applicable cancer risk relative to the residential or sensitive receptor distance as required by PAR 1469. Though there are several types of add-on controls commercially available, for the purpose of calculating a "worst-case" impact versus the achievable control efficiencies, this document assumes that all of the air pollution control devices to be installed as a result of PAR 1469 will be HEPA filtration systems. The total estimated number of air pollution control systems to be installed was determined by the number of existing tanks at each of the 137 affected facilities. Of the 68 facilities required to meet an emission rate of 0.0015 mg/amp-hr, operators of 65 facilities are expected to either install new air pollution control devices or retrofit their existing air pollution control devices.

To estimate the "worst-case" construction- and operational-related emissions associated with the implementation of PAR 1469, the following assumptions were made. Refer to Appendix B for the assumptions used to estimate indirect construction- and operational-related air quality impacts.

Of the 137 affected facilities with 271 tanks, there are 55 facilities with 66 tanks that currently only have in-tank controls. For this reason, these facility operators are expected to install approximately 56 new HEPA systems and dismantle or replace/retrofit 11 existing air pollution control systems in order to meet the 0.0015 mg/amp-hr emission rate. Of the 56 new HEPA systems, only 54 HEPA systems would be required by PAR 1469 to be constructed in compliance year 2009. Based upon available information, the remaining 82 affected facilities already comply with the PAR 1469 requirements and will not need to install add-on pollution control equipment. Therefore, these facilities are excluded from the analysis of indirect impacts resulting from installation of pollution control equipment.

The estimated the number of add-on pollution control equipment that is expected to be installed pursuant to PAR 1469 is based on the assumption that the 55 facilities will install a total of 56 new air pollution control systems and r replace/retrofit 11 existing air pollution control systems.

Based on the type of plating that occurs at the affected facilities, Table 2-2 summarizes the size of the HEPA filtration systems relative to the ventilation rate or air flow throughput. Refer to Appendix B for the assumptions and methodology for determining the designed ventilation rate for the HEPA filtration systems.

Table 2-2
Estimated Number of HEPA Systems Needed Per Designed Ventilation Rate

Type of Plating Tank	No. of HEPA Systems Needed per Designed Ventilation Rate		
	5,000 cfm	10,000 cfm	20,000 cfm
Hard	5 new 1 retrofit	N/A	1 new 1 retrofit
Decorative	31 new 2 retrofit	2 new 1 retrofit	2 new N/A retrofit
Anodizing	13 new 4 retrofit	2 new N/A retrofit	N/A
Combination*	N/A new 1 retrofit	N/A	N/A new 1 retrofit
Total	**57**	**5**	**5**

* Multiple Plating Processes with any combination of hard, decorative and anodizing operations.
cfm = cubic feet per minute
N/A means that there are no equipment in this category.

Construction Assumptions

Construction-related emissions can be distinguished as either onsite or offsite. Onsite emissions generated during construction principally consist of exhaust emissions (NOx, oxides of sulfur (SOx), carbon monoxide (CO), VOC, PM10 and PM2.5) from heavy-duty construction equipment operation, PM10 and PM2.5 from fugitive dust resulting from disturbed soil, and VOC emissions from asphaltic paving and painting. Offsite emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust as PM10 and PM 2.5 from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

With respect to PAR 1469, no construction emissions from grading are anticipated because installation of new air pollution control equipment (i.e., HEPA filtration systems) and the dismantling of existing air pollution control equipment would occur at existing industrial/commercial facilities and, therefore, would not require activities such as digging, earthmoving, grading, slab pouring, or paving. The type of construction-related activities attributable to facilities that would be dismantling existing scrubbers and/or installing new HEPA filtration systems would consist predominantly of cutting, welding, et cetera. Activities during construction that could potentially adversely affect air quality are those activities associated with the installation of new and the dismantling of existing air pollution equipment, including the truck deliveries of equipment and the truck transport trips to remove the dismantled equipment.

PAR 1469 requires compliance with the emission limit for metal plating activities with tanks vented to air pollution control equipment to occur by October 24, 2009, October 24, 2010 or October 24, 2011 depending on the distance to the nearest sensitive receptor and the annual permitted ampere-hours. However, before construction can begin, each facility will be required

to apply for and receive an approved permit to construct. Therefore, from the time each affected facility applies for and receives a permit, it is assumed that each affected facility will have approximately six to nine months for the 2009 compliance date and one year for the 2010 and 2011 compliance dates to construct their HEPA filtration system and dismantle any existing air pollution control equipment, as applicable, in order to comply with PAR 1469.

- For calculating peak daily "worst-case" construction emissions, it is assumed that facility operators will construct 54 HEPA filtration systems within the 10 months following the adoption of PAR 1469 (in year 2009).
- To derive the peak construction-related activities, the 54 add-on controls for the "worst-case" was divided by a two-week construction period to yield a maximum of 27 add-on controls that could be installed during any month and four in any day. This "worst-case" assumption is based on the fact that some facility operators may delay submitting their applications in accordance with the compliance timelines, the total number of permits received at any one time, the SCAQMD's permitting resources, and the availability of contractors to install the add-on controls.
- It is assumed that the combination of installing new equipment and subsequently dismantling existing equipment may take two weeks. The estimated period of two weeks represents a conservative estimate for all facilities that are expected to undergo construction alone or construction and dismantling, as applicable.
- It is assumed that the installation for every add-on control device requires the use of one air compressor and welder that operate four hours per day.
- It is assumed that each add-on control requires a construction crew consisting of four members.

Construction Emissions

The total amount of construction emissions are generated from combustion emissions from construction equipment operating onsite and the workers' offsite vehicle trips. The assumptions used to derive estimates for offsite or mobile source emission increases are based on worker/power resources and hours required to deliver and install a typical HEPA filtration system and to dismantle and haul away an existing system. Assuming a five-day week at four hours per day, the construction project would require four workers per day. Using a 1.0 vehicle occupancy, the labor force would generate approximately four one-way vehicle trips per day for a total of eight round-trip vehicle trips for every facility undergoing construction activities. Assuming an estimated 40-mile round trip each day per vehicle and 80-mile round trip per day for delivery/haul away truck trips, the total daily offsite worker's commute travel emissions that would be attributed to construction-related activities for installing four HEPA filtration systems in any one day are approximately 22 pounds of NOx, six pounds of VOC, 21 pounds of CO, 0.01 pound of SOx, two pounds of PM10 and one pound of PM2.5. To exceed the peak daily significance thresholds for construction emissions, almost 20 facilities would have to undergo construction activities simultaneously. However, based on the aforementioned assumptions, it is highly unlikely that this many facility would undergo construction simultaneously. Refer to Appendix B for the calculations used to estimate offsite mobile source emissions.

Table 2-3 presents the results of the SCAQMD's construction air quality analysis. It lists the total peak daily construction emissions from construction worker trips and use of equipment during the installation of new and the dismantling of existing control devices. The calculations demonstrate that the total daily construction emissions would not generate emissions that exceed the SCAQMD's CEQA air quality thresholds for construction emission significance of 100 pounds per day of NOx, 75 pounds per day of VOC, and 550 pounds per day of CO and 150

pounds of PM10 as discussed in the SCAQMD's CEQA Air Quality Handbook (November 1993). Therefore, air quality impacts from construction emissions are considered to be not significant. Appendix B contains the spreadsheets with the results and assumptions used by the SCAQMD for this analysis.

Table 2-3
Peak Daily Construction Emissions
(in pounds per day)

Peak Construction Activity	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Onsite Emissions*	9.52	4.00	8.28	0	0.92	0.84
Offsite Emissions**	11.84	1.84	14.20	0.04	0.72	0.60
Total Offsite and Onsite	**21**	**6**	**22**	**0**	**2**	**1**
SIGNIFICANCE THRESHOLD	550	75	100	150	150	55
SIGNIFICANT?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

* Construction Activities
** Worker Commute

Operational Assumptions for HEPA Filtration Systems

Day to day operation of new HEPA filtration systems does not rely on natural gas for power and thus does not have the potential to generate significant adverse secondary air quality impacts due to combustion. However, because trucks are used to transport the spent HEPA filters for disposal as hazardous waste, emissions from truck exhaust may contribute to adverse secondary air quality operation impacts. It is important to keep in mind that the toxic and hazardous nature of the products used by the metal finishing industry contain toxic and hazardous materials, meaning that facilities affected by PAR 1469 currently follow procedures for the process, storage, transport, and disposal of hazardous waste via truck trips. Based on facility data combined with conservative estimates when data were not available, of the 56 new add-on control devices to be installed and the 11 existing air pollution control systems to be retrofitted, a total of 492 HEPA filters are estimated to be needed on an annual basis. Manufacturer recommendations suggest the replacement of HEPA filters should occur anywhere from once a year to once every two years, depending on the loading or throughput. For a "worst-case" analysis, it is assumed that each HEPA filtration system will require replacement of its HEPA filters once per year, which means that each facility will have a maximum disposal rate of six HEPA filters per year for a 5,000 cfm system, 12 HEPA filters per year for a 10,000 cfm system, and 18 filters per year for a 20,000 cfm system. With a typical dimension of one HEPA filter at approximately two feet wide by two feet long by four inches deep or 1.3 cubic feet, disposal size of HEPA filters per year equates to approximately 7.8 cubic feet of hazardous waste per 5,000 cfm system, 15.6 cubic feet per 10,000 cfm system, and 23.4 cubic feet per 20,000 cfm system. For all 67 HEPA systems expected to be installed or retrofitted, the total annual disposal of HEPA filters is estimated to be 640 cubic feet.

Therefore, because the replacement and disposal frequency of the HEPA filters is calculated to be relatively low (e.g. between six and 18 per system per year), it is not practical or likely that each facility will arrange for a separate transport trip uniquely for the purpose of disposing the spent HEPA filters. Instead, the spent HEPA filters are expected to be included as part of the

same number of truck trips that each facility currently has scheduled to dispose of the other hazardous wastes generated on-site from the plating and anodizing process chemistries. With no change to the current setting as it pertains to the delivery schedule for trucks to pick up and dispose the collected additional hazardous waste (as HEPA filters) expected, no increase in operational emissions due to the disposal of spent HEPA filters is anticipated as a result of implementing PAR 1469. However, for every spent HEPA filter, a new replacement would be required. Therefore, 492 fresh HEPA filters would need to be delivered to 65 facilities in a given year. Given the number of work days in a year and the fact that only 65 facilities would require replacement HEPA filters, it is unlikely that more than one delivery trip per day will occur. However, to be consistent with the construction analysis for a conservative worst-case day, four delivery trips per day were assumed to occur. Therefore, to account for the additional deliveries, a maximum of one truck delivery trip per day at 80 miles round trip is assumed for this analysis. Based on this scenario of a maximum of four heavy-duty truck trips per day, the total daily offsite travel emissions that would be attributed to HEPA filter deliveries are approximately: 13.4 pounds of NOx, one pound of VOC, four pounds of CO, 0.04 pound of SOx, one pound of PM10 and one pound of PM2.5. Refer to Appendix B of this document for the assumptions and calculations.

Operation Emissions from Chemical Fume Suppressants

Based on facility data combined with conservative estimates when data were not available for the universe of sources, one tank at one facility is estimated to begin using a certified fume suppressant to comply with PAR 1469. (Most of the facilities subject to PAR 1469 already use certified fume suppressants.) PAR 1469 does not specify the use of any particular chemical fume suppressant. Based on the product material safety and data sheets (MSDS), the majority of the chemical fume suppressants that are expected to be used by the metal plating industry to comply with PAR 1469 consist mostly of water and surfactants, but may also contain a small quantity VOCs (i.e., no more 50 grams of VOC per liter of material). Further, the MSDS sheets indicate that none of the chemical fume suppressants currently available on the market contain any ozone depleting compounds or global warming compounds. Thus, use of these products would not be subject to additional permitting or regulatory requirements other than the certification requirements proposed in PAR 1469. For the one facility that is expected to start using chemical fume suppressants, an increase of approximately 0.004 pound per day of VOCs is expected. Refer to Appendix B of this document for the assumptions and calculations.

Total Operation Emissions

Table 2-4 presents the results of the SCAQMD's operation air quality analysis. It lists the total daily operation emissions from four deliveries of fresh HEPA filters to four facilities in one day and the use of chemical fume suppressants at one facility. Again, the calculations demonstrate that the total daily operation emissions would not generate emissions that exceed the SCAQMD's CEQA air quality thresholds for construction emission significance of 55 pounds per day of NOx, 55 pounds per day of VOC, 550 pounds per day of CO, 150 pounds of PM10 and 55 pounds per day of PM2.5 as discussed in the SCAQMD's CEQA Air Quality Handbook (November 1993). Therefore, air quality impacts from operation emissions are considered to be not significant. Appendix B contains the spreadsheet with the results and assumptions used by the SCAQMD for this analysis.

Table 2-4
Operation Emissions
(in pounds per day)

Peak Construction Activity	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Onsite Emissions*	0	0	0	0	0	0
Offsite Emissions**	4	1	13	0	1	1
Total Offsite and Onsite	**4**	**1**	**13**	**0**	**1**	**1**
SIGNIFICANCE THRESHOLD	550	55	55	150	150	55
SIGNIFICANT?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

* Use of Chemical Fume Suppressants
** Truck trips for delivering fresh HEPA filters

Summary of Global Warming Impacts
Combustion activities such as operation of construction equipment as well as offsite worker trips and truck deliveries generate greenhouse gas (GHG) emissions in addition to criteria pollutants. The following analysis focuses on directly emitted CO2 and methane (CH4), a gas with 21 times the global warming potential of CO2, because these are the primary GHG pollutants emitted during the combustion process and they are the GHG pollutants for which emission factors are most readily available. CO2 and CH4 emissions were estimated using emission factors from CARB's EMFAC2007 and Offroad2007 models and EPA's AP-42.

The analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, the significance thresholds are based on daily emissions because attainment or non-attainment is based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health, e.g., one-hour and eight-hour standards. Since the half-life of CO2 is approximately 100 years, for example, the effects of GHGs occur over a longer term which means they affect the global climate over a relatively long time frame. As a result, the SCAQMD's current position is to evaluate the effects of GHGs over a longer timeframe than a single day. Although GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects, this Draft EA analyzes the GHG emissions from the use of welders and air compressors as well as from construction worker trips and heavy duty truck delivery trips.

For the purposes of addressing the GHG impacts of PAR 1469, the overall impacts of CO2 and CH4 emissions from the proposed project were estimated and evaluated from initial implementation of the proposed project beginning in 2009 for the majority of affected units (the initial full compliance date is the date of adoption of PAR 1469, but actual implementation is expected to occur after applications for permits are submitted and permits to construct are issued) until October 24, 2011, the final compliance date. Tables 2-5 and 2-6 summarize the CO2 & CH4 impacts from both construction and operation activities, respectively. Refer to Appendix B for the GHG estimates

Table 2-5
Overall GHG (CO2 plus CO2 eq as CH4) Increases Due to Construction Activities (metric tons/year) [1]

	Compliance Year		
Annual GHG Emission Increases	***2009***	***2010***	***2011***
Installing 54 HEPA systems in 2009	18	0	0
Retrofitting 7 HEPA systems in 2010	0	2	0
Retrofitting 6 HEPA systems in 2011	0	0	1
GHG Increases (metric tons/year)	**18**	**2**	**1**

[1] 1 metric ton = 2,205 pounds

Table 2-6
Overall GHG (CO2 plus CO2 eq as CH4) Increases Due to Operation Activities (metric tons/year) [1]

	Compliance Year		
Annual GHG Emission Increases	***2009***	***2010***	***2011***
Operating 54 HEPA systems in 2009	8	8	8
Operating 7 HEPA systems in 2010	0	1	1
Operating 6 HEPA systems in 2011	0	0	1
GHG Increases (metric tons/year)	**8**	**9**	**10**

[1] 1 metric ton = 2,205 pounds

Neither SCAQMD nor any other air regulatory agency in California has formally established a significance threshold for GHG emissions yet. In the absence of a specific significance threshold, SCAQMD staff has evaluated significance for projects where it is the lead agency on a case-by-case basis. In this analysis, SCAQMD staff has used a variety of benchmarks to evaluate GHG impacts. As additional information is compiled with regard to the level of GHG emissions that constitute a significant cumulative climate change impact, SCAQMD will continue to revisit and possibly revise the level of GHG emissions considered to be significant.

In its *CEQA & Climate Change* document (January, 2008), the California Air Pollution Control Officers Association (CAPCOA) identifies many potential GHG significance threshold options. The CAPCOA document indicates that establishing quantitative thresholds is a balance between setting the level low enough to capture a substantial portion of future residential and non-residential development, while also setting a threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions. For example, CAPCOA identifies one potential significance threshold as 10,000 metric tons per year, which was considered by the Market Advisory Committee for inclusion in a Greenhouse Gas Cap and Trade System in California. Another potential threshold identified by CAPCOA is 25,000 metric tons per year, which is CARB's proposed mandatory reporting threshold under Assembly Bill (AB) 32. As shown in Tables 2-5 and 2-6, GHG emissions increases from implementing PAR 1469 would be substantially lower than both of these reporting thresholds.

Finally, another approach to determining significance is to estimate what percentage of the total inventory of GHG emissions are represented by emissions from a single project. If emissions are a relatively small percentage of the total inventory, it is possible that the project will have little or no effect on global climate change. According to available information, the statewide inventory of CO2 equivalent (CO2eq.) emissions is as follows: 1990 GHG emissions equal 427 million metric tons of CO2eq. and 2020 GHG emissions equal 600 million metric tons of CO2eq. with business as usual.

Interpolating a statewide GHG inventory for the year 2011 (the operational year with the highest amount CO2 emissions from PAR 1469) results in approximately 548 million metric tons of CO2eq. The CO2 emission increase in 2011 from PAR 1469 would be approximately 10 metric tons of CO2eq which represents 1.8×10^{-6} percent of the statewide GHG inventory estimated for 2011. This extremely small percentage of GHG emissions from PAR 1469 as compared to the total projected statewide GHG emissions inventory is another basis for the SCAQMD's conclusion that GHG emissions from implementing PAR 1469 are less than significant.

PAR 1469 is part of a comprehensive ongoing regulatory program that includes implementing the ATCM for hexavalent chromium electroplating and chromic acid anodizing operations as well as implementing related SCAQMD 2007 AQMP control measures as amended or new rules to attain and maintain with a margin of safety all state and national ambient air quality standards for all areas within its jurisdiction. The 2007 AQMP estimates a CO2 reduction of 427,849 metric tons per year by 2014, and a CO2 reduction of 1,523,445 metric ton per year by 2020. Therefore, PAR 1469 in connection with other 2007 AQMP control measures is not considered to be cumulatively considerable and, therefore, is not considered to be a significant cumulative GHG impact.

Since GHG emissions are considered cumulative impacts, and the GHG emission increases from PAR 1469 are considerably below the 10,000 metric ton per year Market Advisory Committee threshold, 25,000 metric ton per year CARB proposed mandatory reporting threshold under AB 32, a small percentage of the total statewide GHG inventory in 2011, and, with other control measures in the 2007 AQMP, which is a comprehensive ongoing regulatory program that would reduce overall CO2 emissions; cumulative GHG adverse impacts from PAR 1469 are not considered significant.

Conclusion

Based on the aforementioned information, the proposed project would not result in significant adverse air quality impacts. As such, the proposal would not diminish an existing air quality rule or future compliance requirement, nor conflict with or obstruct implementation of the applicable air quality plan. The proposal has no direct provision that would violate any air quality standard or directly contribute to an existing or projected air quality violation. Since project-specific impacts are not expected to exceed air quality significance thresholds established by the SCAQMD and the effect of AQMP control measures is to reduce GHGs, the effects of the proposed project are not considered cumulatively considerable. Therefore the above facts and analyses demonstrating that project-specific air quality impacts from implementing the proposed project are not significant support the conclusion that the proposed project will not result in a cumulatively considerable net increase of any criteria pollutant.

III.d) The primary objective of the proposed project is to reduce population exposure to toxic air contaminants. Affected facilities are not expected to expose sensitive receptors to substantial secondary pollutant concentrations from the installation and operation of add-on controls for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas; 2) the purpose of the add-on controls is to reduce toxics generated by the metal finishing industry; 3) emissions to operate the add-on controls and for using chemical fume suppressants do not exceed any SCAQMD thresholds; and, 4) add-on controls and the use of chemical fume suppressants must comply with all applicable SCAQMD rules and regulations to receive a permit to operate. Therefore, this impact issue will not be further analyzed in this Draft EA.

III.e) Most of the existing affected facilities are located in industrial and commercial areas, but some sensitive receptors are located in the vicinity of some of the facilities. Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. The proposed requirements in PAR 1469 are expected to reduce toxic emissions, hexavalent chrome in particular, which, to the extent that hexavalent chrome has any odors associated with it, can potentially reduce odors from affected facilities. This effect would be most noticeable from those affected facilities that have sensitive receptors located nearby. Although PAR 1469 will require some affected facilities to modify their existing operations, the installation and operation of air pollution control equipment and the use of chemical fume suppressants serve to reduce emissions of air toxics and, therefore, are not expected to create objectionable odors affecting a substantial number of people. Therefore, no significant adverse odor impacts are expected to result from implementing the proposed amendments.

III.f) The objective of PAR 1469 is to enhance the effectiveness of an existing rule by imposing more stringent requirements compared to existing Rule 1469. Further, affected facilities will be required to comply with all relevant SCAQMD rules and regulations, which may include any or all of the following: source specific rules (Regulation XI); prohibitory rules (Regulation IV); toxic rules (Rules 1401, 1402, etc.); and New Source Review (Regulation XIII). Accordingly, the proposed project is not expected to diminish an existing air quality rule so this impact issue will not be further analyzed in this Draft EA.

Based upon all of the aforementioned considerations, the SCAQMD has demonstrated that implementing the proposed project will not create significant adverse air quality impacts, either individually or cumulatively, and this topic will not be further analyzed in the Draft EA.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES.** Would the project:			
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☑
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☑
c)	Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☑
f)	Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☑

Significance Criteria

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

Discussion

IV.a), b), c), & d) PAR 1469 would only affect equipment or processes located at approximately 65 existing facilities in areas that have already been developed, primarily industrial or commercial areas, which have already been greatly disturbed. In general, these areas currently do not support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities are not expected to be found in close proximity to the affected facilities. In general, most plants, with the possible exception of some types of decorative plants, are typically removed from industrial or commercial facilities to reduce fire hazards. Since the proposed project does not induce growth in the metal finishing sector, plant removal for the purpose of reducing fire hazards will not occur as result of implementing the proposed project.

IV.e) & f) PAR 1469 is not envisioned to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans. Additionally, PAR 1469 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that the proposed project, as amended, will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations.

Based upon these considerations, significant adverse biological resources impacts are not anticipated and will not be further analyzed in this Draft EA. Since no significant adverse biological resources impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:			
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☑
d)	Disturb any human remains, including those interred outside a formal cemeteries?	☐	☐	☑

Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

Discussion

V.a) Since construction-related activities associated with the implementation of PAR 1469 are expected to be minimal and confined within the footprint of affected facilities (typically inside the affected facility), no substantial changes to historical resources are anticipated as a result of implementing the proposed project.

V.b), c), & d) Installing add-on controls and other associated equipment to comply with PAR 1469 will require minimal disturbance at any individual site because affected facilities are typically located in previously disturbed and developed areas. Since construction-related activities are expected to be minimal, PAR 1469 is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources or disturb human remains that may be interred outside of formal cemeteries. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed and would not be further disturbed as a result of implementing the proposed project.

Based upon these considerations, significant adverse cultural resources impacts are not expected from the implementing PAR 1469 and will not be further assessed in this Draft EA. Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
VI.	**ENERGY.** Would the project:			
a)	Conflict with adopted energy conservation plans?	☐	☐	☑
b)	Result in the need for new or substantially altered power or natural gas utility systems?	☐	☑	☐

		Potentially Significant Impact	Less Than Significant Impact	No Impact
c)	Create any significant effects on local or regional energy supplies and on requirements for additional energy?	☐	☑	☐
d)	Create any significant effects on peak and base period demands for electricity and other forms of energy?	☐	☑	☐
e)	Comply with existing energy standards?	☐	☐	☑

Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

Discussion

VI.a) & e) The proposed project would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PAR 1469 would affect existing facilities, it will not conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing or complying with any existing energy conservation plans. Additionally, affected facilities are expected to comply with existing energy conservation plans and standards to minimize operating costs, but still comply with the requirements of PAR 1469. Accordingly these impact issues will not be further analyzed in the Draft EA.

VI.b), c), & d) The use of chemical fume suppressants is not expected to change the energy demand at affected facilities for operating these devices. The use of add-on control equipment may, however, require additional electricity for operation. The SCAQMD has determined that the equipment and vehicles needed for construction- and operational-related activities associated with the implementation of PAR 1469 are necessary. Potential adverse energy impacts from implementing the proposed project are analyzed in the following paragraphs.

The proposed project would require the installation of add-on control equipment, specifically HEPA filtration systems at 65 facilities and the new use of chemical fume suppressants at one facility. Though the use of chemical fume suppressants is not expected to change the energy demand for operating these devices, the use of add-on control equipment may, however, require additional electricity. In addition, for any facilities that may dismantle their existing air pollution control equipment and replace it with new air pollution control equipment, as a practical matter, a slight reduction in the electricity demand could occur. However, due to lack of actual facility data with respect to energy use for the existing devices, this reduction has not been calculated and thus, this document does not contain a quantified offset to the projected increase in electrical

demand necessary for operating the new add-on controls. Natural gas is not used for either the construction or operation of HEPA filtration systems.

Specifically, HEPA filtration control techniques are characterized by high removal efficiency and moderate to high energy requirements in most applications. In order to achieve high removal efficiencies, the filters are made of extremely low porosity materials which impose a high resistance to the flow of gas, which results in an exhaust flow pressure drop through the filter media. The higher the pressure drop across a control device, the higher the electrical energy requirement to operate larger fan motors needed to overcome the flow resistance.

Additional energy information and the energy consumption calculations as they relate to the operational activities of the proposed HEPA filtration systems were derived from the estimated ventilation rates as shown in Appendix B of this document. In addition, an increase in the use of gasoline and diesel fuel is anticipated as a result of both construction and operation activities due to worker commute trips and truck delivery trips, respectively, is expected and the calculations are shown in Appendix B.

Construction Impacts

During the construction phase of PAR 1469, diesel and gasoline fuel will be consumed in portable construction equipment (e.g., compressors and welders) used to weld, cut, and grind metal structures and by construction workers' vehicles commuting to and from construction sites. To estimate the "worst-case" energy impacts associated with the construction phase of PAR 1469 (e.g., the installation of add-on controls), the SCAQMD assumed that portable equipment used to weld, cut, and grind metal structures would be operated up to four hours per day. As previously noted the analysis of construction air quality impacts, site preparation using heavy-duty off-road construction equipment such as graders, dozers, scrapers, etc., will not be required for construction because construction consists primarily of installing HEPA filtration systems at existing facilities. The reader is referred to Appendix B for the assumptions and calculations used by the SCAQMD to estimate fuel usage associated with the implementation of PAR 1469.

To estimate construction workers' fuel usage per commute round trip, the SCAQMD assumed workers' vehicles would get 20 miles to the gallon and would travel 50 miles round trip to and from the construction site in one day. Table 2-7 lists the projected construction energy fuel use impacts associated with PAR 1469. Therefore, the equipment and vehicles needed for construction-related activities associated with the implementation of PAR 1469 are necessary, will not use energy in a wasteful manner, and will not exceed SCAQMD significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies. Further, the results confirm the energy impacts from the proposed project during construction will not be significant.

Table 2-7
Total Projected Fuel Usage for Construction Activities

Construction Activity	Total Fuel Usage per Activity (gallons/yr)	
	Diesel	**Gasoline**
Onsite Equipment	881	--
Offsite Equipment	883	2,700
Fuel Supply[a]	1,086,000,000	6,469,000,000
% of Fuel Supply	0.0002%	0.00004%
Significant (Yes/No)[b]	No	No

[a] Year 2000 California Energy Commission (CEC) projections. Construction activities in future years would yield similar results.
[b] SCAQMD's Energy Threshold for both Diesel and Gasoline is 1% of Supply.

Operational Impacts

To derive the "worst-case" potential electricity demand impacts associated with implementing PAR 1469, the SCAQMD assumed that all of the add-on controls will create electrical energy impacts associated with the operation of ancillary equipment (e.g., fans, motors, et cetera). As shown in Appendix B of this document, it is estimated that 56 new HEPA filtration systems will be installed and 11 existing HEPA filtration systems will be retrofitted. The HEPA filtration systems operate at varying electrical horsepower (hp) ratings (15, 20, and 50 hp), depending on the estimated ventilation rates (5,000, 10,000, and 20,000 cfm) for 12 hours per day, five days per week, and 52 weeks per year (see also section "III. Air Quality" for additional assumptions regarding operation). Based on these assumptions, the annual energy demand, in megawatt-hours per year (MW-hr/yr) and the daily instantaneous electricity demand in megawatts (MW) were calculated per installed system per ventilation rate. For all 67 HEPA systems, the total projected electrical demand was calculated to be 2,804 MW-hr/yr and the instantaneous demand was calculated to be 0.90 MW or 0.0119 percent of the available electricity supply in the District.

Table 2-8 summarizes the projected energy impacts associated with the operational phase of PAR 1469. The complete methodology and assumptions that the SCAQMD used to estimate the operational impacts from add-on controls are contained in Appendix B.

Similarly, to calculate how much fuel (e.g., natural gas) may be required by in-district or out-of-district power plants to generate the incremental electricity needed by affected facilities to comply with PAR 1469, fuel use is assumed to be directly proportional to the amount of electrical demand. This means that if the projected electrical demand is 2,804 MW-hr/yr, then the amount of natural gas that would be needed to produce any additional electricity necessary for operating the electric fans or motors for the HEPA systems could be converted to 8.79 million cubic feet of natural gas per year or 0.11 percent of the available natural gas supply.

For the additional fuel that may be needed to meet affected facilities' electrical demands, the consumption of fuel would be for the purpose of aiding facilities in complying with PAR 1469. Further, the consumption of fuel to comply with air quality regulations is not considered a wasteful use of energy. Therefore, fuel consumed by power plants to generate additional

electricity for electric fans or motors used in conjunction with add-on controls is not considered to be a significant adverse energy impact. Furthermore, based on the calculations, the small amount of additional fuel that may be used to generate electricity would be negligible compared to existing supplies and, thus, would not substantially deplete existing energy resources.

Table 2-8
Total Projected Energy Impacts for Operation Activities

Operation Activity	Total Energy Usage per Activity	
	Natural Gas	**Electricity**
HEPA Filtration Systems	8.79 MMCF	2,804 MW-hr/yr
Total	8.79 MMCF	0.90 MW (instantaneous)
Fuel Supply[a]	7,734 MMCF	27,725 MW (instantaneous)
% of Fuel Supply	0.11 %	0.003%
Significant (Yes/No)[b]	No	No

[a] Year 2008 CEC projections from California Energy Demand 2008-2018 Staff Revised Forecast, California Energy Commission, November 2007 (CEC-200-2007-015-SF2). Construction activities in future years are expected to yield similar results.

[b] SCAQMD's Energy Threshold for both Natural Gas Diesel and Electricity is 1% of Supply.

KEY: MMCF = million cubic feet MW = Megawatt

Based upon the aforementioned considerations, the proposed project is not expected to use energy in a wasteful manner, and will not exceed SCAQMD significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies. Furthermore, if additional fuel is needed to generate electricity for electric fans or motors used in conjunction with HEPA filtrations systems at affected facilities, it would not be a wasteful use of energy nor substantially deplete existing energy resources. Further, PAR 1469 would not create any significant effects on peak and base period demands for electricity and other forms of energy and it is expected to comply with existing energy standards. Therefore, implementing the proposed project is not anticipated to generate significant adverse energy resources impacts as demonstrated by the preceding analysis and will not be discussed further in this Draft EA. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
VII.	**GEOLOGY AND SOILS.** Would the project:			
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☑
	• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☑
	• Strong seismic ground shaking?	☐	☐	☑
	• Seismic–related ground failure, including liquefaction?	☐	☐	☑
	• Landslides?	☐	☐	☑
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☑

Significance Criteria

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion

VII.a) Southern California is an area of known seismic activity. Accordingly, the installation of add-on controls at existing affected facilities to comply with PAR 1469 is expected to conform to the Uniform Building Code and all other applicable state codes. New structures must be designed to comply with the Uniform Building Code Zone 4 requirements since the district is located in a seismically active area. The local cities or counties are responsible for assuring that projects comply with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the Code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some non-structural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage.

The Uniform Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation conditions at the site.

Any potentially affected existing facilities that are located in areas where there has been historic occurrence of liquefaction, e.g., coastal zones, or existing conditions indicate a potential for liquefaction, including expansive or unconsolidated granular soils and a high water table, would already be subject to the potential for liquefaction-induced impacts at the project sites. The Uniform Building Code requirements consider liquefaction potential and establish more stringent requirements for building foundations in areas potentially subject to liquefaction. Therefore, compliance with the Uniform Building Code requirements is expected to minimize the potential impacts associated with liquefaction. The issuance of building permits from the local cities or counties will assure compliance with the Uniform Building Code requirements. Therefore, no significant impacts from liquefaction, are expected and this potential impact will not be considered further.

Because facilities affected by the proposed project are typically located in developed areas, primarily industrial or commercial areas, which are not typically located near known geological hazards (e.g., landslide, mudflow, seiche, tsunami or volcanic hazards), no significant adverse geological impacts are expected. Tsunamis at the ports, i.e., Port of Los Angeles and Port of Long Beach, are not expected because the ports of Long Beach and Los Angeles are surrounded by breakwaters that protect the area from wave action. As a result, these topics will not be further evaluated in this document.

VII.b) As already noted in the analysis of construction air quality impacts, implementing the proposed project is not expected to require substantial site preparation such grading, scraping, et cetera, because construction activities will consist primarily of installing add-on air pollution control equipment at existing industrial facilities. Since add-on controls will be installed with minimal construction activities at existing industrial or commercial facilities, there will be little or no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of beach sand; or changes in existing siltation rates associated with the installation of add-on control equipment.

VII.c) & d) PAR 1469 will not induce construction of new industrial facilities that might be susceptible to liquefaction or expansive soils as defined in Table 18-1-B of the Uniform Building Code. Since PAR 1469 will affect existing facilities, it is expected that the soil types present at the affected facilities will not be further susceptible to expansion or liquefaction. Furthermore, subsidence is not anticipated to be a problem since little excavation, grading, or filling activities will occur at affected facilities. Additionally, the affected areas are not envisioned to be prone to landslides or have unique geologic features since the affected facilities are located in developed areas, typically industrial or commercial areas, which are not near unique geologic features prone to landslides. Even if affected existing facilities are located in areas subject to subsidence, landslides, et cetera, these would be considered baseline conditions. As indicated here, the proposed project would not exacerbate this existing condition.

VII.e) PAR 1469 will not induce construction of new facilities using septic tanks or alternative wastewater disposal systems. As a result, no significant adverse impacts involving soils incapable of supporting septic tanks or alternative wastewater disposal systems will be generated by implementing PAR 1469.

Based upon these considerations, significant geology and soils impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this Draft EA. Since no significant geology and soils impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
VIII.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:			
a)	Create a significant hazard to the public or the environment through the routine transport, use, disposal of hazardous materials?	☐	☐	☑
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑
c)	Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☑
i)	Significantly increased fire hazard in areas with flammable materials?	☐	☐	☑

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

Discussion

VIII.a) & b) To comply with PAR 1469, affected facilities are expected to use HEPA filtration systems. The analysis of operational air quality impacts in the "Air Quality" section of this document estimated that disposal of the spent HEPA filters would occur relatively infrequently (i.e., less than one filter per year per system) as compared to the current setting for hazardous waste disposal of all the hazardous materials generated at the affected facilities. Based on the infrequent disposal of spent HEPA filters, a substantial increase in the number of truck trips needed to transport the spent HEPA filters as hazardous wastes is not expected. Because of the extensive state and federal requirements for tracking and accounting for hazardous wastes, disposal of spent HEPA filters is not expected to create new hazardous wasted transport trips, but

the waste filters are expected to be included as part of the hazardous waste transport trips that already occur periodically. As a result, implementing PAR 1469 is not expected to create new hazards through the transport and disposal of hazardous wastes.

It is also expected that one facility may begin using chemical fume suppressants to comply with PAR 1469. The use of chemical fume suppressants in metal finishing operations is designed to alter the physical properties of bath chemistries used in these operations. This analysis evaluates potential hazard impacts of using chemical fume suppressants. Because most of the facilities subject to PAR 1469 already use chemical fume suppressants, which are typically supplied by the same companies that distribute the main chemicals needed for metal plating and anodizing operations, this analysis assumes that there will be no increase in potential truck trips for delivery of fume suppressants to those facilities not currently using them. Further, because the chemical fume suppressants are primarily comprised of water and surfactants that do not contain toxic or hazardous materials, this analysis assumes that there will not be an increase in any hazardous material or waste transport trips in response to PAR 1469. In summary, implementation of PAR 1469 is not expected to alter any existing hazards involving the routine transport, use, or disposal of hazardous wastes (i.e., spent HEPA filters) or the routine transport and use of chemical fume suppressants used in metal plating and anodizing operations, especially since fume suppressants are typically not comprised of hazardous materials. Similarly, implementing PAR 1469 is not expected to increase the probability of reasonably foreseeable accidents involving the release of hazardous materials into the environment.

VIII.c), In general, PAR 1469 is expected to reduce emissions of hexavalent chrome, which is classified by EPA and OEHHA as a human carcinogen. In particular, PAR 1469 would establish more stringent emission limits for hexavalent chromium emissions. As a result, PAR 1469 will serve to reduce cancer risks from exposure to hexavalent chromium emissions in general and will provide more protections for sensitive receptors, schools, schools under construction, and areas zoned for residences and mixed uses. Consequently, this topic will not be evaluated further.

VIII.d) Even if some affected facilities are designated pursuant to Government Code §65962.5 as a large quantity generator of hazardous waste, it is anticipated that these facilities will continue to manage their hazardous wastes in accordance with all applicable federal, state, and local rules and regulations. Complying with the requirements of PAR 1469 is not expected to interfere with existing hazardous waste management programs. Accordingly, this impact issue is not further evaluated in this Draft EA.

VIII.e) & f) Modifications at affected facilities are not expected to create hazardous emissions that could adversely affect public or private airports located in close proximity to the affected facilities. Specifically, the main objective of implementing PAR 1469 is to reduce cancer risks in the district through further reductions in hexavalent chromium emissions. As already noted, emissions from fume suppressants are expected to be minimal (refer to the analysis of operational air quality impacts in the "Air Quality" section). Installing filtration systems at affected facilities will further reduce air toxic emissions at affected facilities, thus, providing emission reduction benefits to any public or private airports that may be located within two miles of affected facilities. As previously mentioned in the Air Quality discussion in section III.d) of this document, affected facilities are not expected to expose sensitive receptors to substantial secondary pollutant concentrations from the installation and operation of add-on controls for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas; 2) the purpose of the add-on controls is to reduce toxics generated by the

metal finishing industry; 3) emissions to operate the add-on controls and for using chemical fume suppressants do not exceed any SCAQMD thresholds; and, 4) add-on controls and the use of chemical fume suppressants must comply with all applicable SCAQMD rules and regulations to receive a permit to operate. Further, the SCAQMD will not issue permits for facility modifications unless they comply with all relevant SCAQMD rules and regulations, including Rule 1401. Accordingly, these impact issues are not further evaluated in this Draft EA

VIII.g) PAR 1469 has no provisions that would impair or physically interfere with any adopted emergency response plans Existing facilities that handle, store, or transport hazardous materials would already be expected to have an existing business emergency response plan. Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
    1. The safe handling of hazardous materials used by the business;
    2. Methods of working with the local public emergency response agencies;
    3. The use of emergency response resources under control of the handler; and,
    4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. Complying with the requirements of PAR 1469 is not expected to interfere with adopted emergency response plans; however, depending on the method of compliance some facilities may need to modify existing emergency response plans. Modifications to an existing emergency plan are not considered to be a significant impact that would interfere with its implementation.

VIII.h) Since the facility modifications will occur at existing industrial or commercial sites in urban areas where wildlands are not prevalent, risk of loss or injury associated with wildland fires is not expected. Accordingly, this impact issue is not further evaluated in this Draft EA.

VIII.i) Because fume suppressants are not flammable or hazardous, PAR 1469 will not affect current operations nor cause an increase in the storage or use of flammable and otherwise hazardous materials, cause an increase in the probability of an accidental release into the environment or cause an increase in existing fire hazards at affected facilities. In general, existing emergency planning is anticipated to adequately minimize the risk associated with the use of chemical fume suppressants. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset hazards. Implementation of PAR 1469 is not expected to affect these permit conditions.

The Uniform Fire Code and Uniform Building Code sets standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Further, all hazardous materials are expected to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. When taken together, the above regulations provide comprehensive measures to reduce hazards, if any, of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure that the potential for explosions or accidental releases of hazardous materials will remain less than significant.

Based upon these considerations, significant hazards and hazardous materials impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this Draft EA. Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
IX. HYDROLOGY AND WATER QUALITY. Would the project:			
a) Violate any water quality standards or waste discharge requirements?	☐	☑	☐

		Potentially Significant Impact	Less Than Significant Impact	No Impact
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☑	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	☐	☐	☑
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☐	☑	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☑
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flaws?	☐	☐	☑
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☑
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
k)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☑	☐
l)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
m)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
n)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑
o)	Require in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☑	☐

Significance Criteria
Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Quality:
- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.
- The project increases demand for water by more than five million gallons per day.

Discussion

IX.a), f), k), l), & o) It is not expected that potential changes in wastewater volume composition from affected facilities would violate any water quality standard or wastewater discharge requirements since the volume of chemical fume suppressant use associated with implementing PAR 1469 will be small and the amount of water required to operate the mist eliminator will be recycled for reuse. Water quality impacts are evaluated more fully in the following paragraphs.

There are provisions in PAR 1469 that could require a slight increase in the amount chemical fume suppressants used in metal plating and anodizing tanks. However, the chemical composition of the fume suppressants is comprised mostly of water and non-hazardous, non-toxic surfactants. The contents of each metal finishing tank are currently subject to strict wastewater pre-treatment requirements to recapture, contain and dispose of or recycle various components of each tank bath. Thus, the use of chemical fume suppressants will not change this requirement. Further, the total quantity of chemical fume suppressants expected to be used by one facility is so minimal (e.g., approximately three gallons per year or 0.01 gallon per day). Consequently, as a result of using chemical fume suppressants, there is minimal change anticipated in the composition or volume of existing wastewater streams from the affected facilities that would require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

PAR 1469 is also expected to result in the installation and/or retrofit of 67 HEPA filtration systems. As part of the pre-filtration function of the HEPA filtration system, each system is also designed to function with a mist eliminator that uses water to wash down the mesh pads or chevron baffles. The projected water usage for each mist eliminator is a function of the HEPA filter ventilation rate. As calculated in Appendix B, the total increase of water needed for operating the HEPA filtration systems with new mist eliminators would be approximately 672 gallons per day for 56 new HEPA filter systems and 11 retrofitted/replaced HEPA filter systems[7]. However, this water is typically treated and recycled for reuse through the system. Because the contents of each metal finishing tank are currently subject to strict wastewater pre-treatment requirements to recapture, contain and dispose of or recycle various components of each tank bath, the wash down water will be subject to the same standards. Thus, the use of mist eliminators will not change this requirement. Further, the total increase of chemical fume suppressants expected to be used is minimal (e.g., approximately three gallons per year or 0.01 gallon per day). Consequently, as a result of using mist eliminators, there is no change anticipated in the composition or volume of existing wastewater streams from the affected facilities that would require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

Because the water will be treated and recycled back into the mist eliminator, the composition of each facility's wastewater streams are not expected to be altered because of the add-on controls. Therefore, it is not expected that potential changes in wastewater composition from affected

[7] The 11 existing HEPA filter systems are not currently equipped with mist eliminators, so when they get retrofitted or replaced, a new mist eliminator will be installed and an increase in water use will be expected.

facilities would violate any water quality standard or wastewater discharge requirements since wastewater volumes associated with PAR 1469 will be at a maximum, equivalent to the water demand necessary to operate the mist eliminators.

IX.b) & n) The use of HEPA filtration systems equipped with mist eliminators has the potential to increase water demand in the district. During the operation of the mist eliminator, the wet particulates collect on the mesh pad or chevron baffle, as applicable to the type of unit installed, the collected material is washed down with water, the collected plating solution is returned to the plating bath, and the water is treated and re-circulated into the unit again. Over time, some water may evaporate and thus additional fresh water may need to be added to make up for the evaporative loss. Staff expects that 56 new HEPA filtration systems and 11 existing HEPA filtration systems will be equipped with new mist eliminators to comply with the proposed amendments. For the purposes of this analysis, the maximum water flowrate per facility that can be used to estimate potential water demand generated by PAR 1469 is based on the design ventilation rate or cfm air flowrate of the HEPA filtration systems. The assumptions of water flowrate are based on manufacturer specifications and the water demand calculation can be found in Appendix B of this document. If the owners or operators of all 25 facilities are assumed to install HEPA filtration systems equipped with mist eliminators, approximately 672 gallons per day would be needed for all affected facilities. This incremental daily increase in water demand anticipated for PAR 1469 is negligible compared to the total district supply of 4.22 million acre-feet (MAF) for 1995. Further, this incremental increase in water demand does not exceed the SCAQMD's significance threshold of 5,000,000 gallons per day and, therefore, is not considered to be significant.

Water demand impacts associated with the use of HEPA filtration systems equipped with mist eliminators are not expected to exceed the SCAQMD's significance threshold of 5,000,000 gallons per day. It is within the capacity of the local water purveyors to supply the relatively small incremental increase in water demand for all affected facilities that would be subject to PAR 1469. Based on the preceding analysis, PAR 1469 has no provision that would require the construction of additional water resource facilities, the need for new or expanded water entitlements.

It should also be noted that water providers throughout the state are currently exploring various strategies for increasing water supplies and maximizing the use of existing supplies. Options include increasing storage capacity, acquiring additional supplies of water from existing sources such as unused water allocations to other states or agricultural agencies, and advance delivery of water to irrigation districts. These continuing and future water management programs help to assure that the area's full-service water demands will be met at all times. Therefore, no significant water demand impacts are expected as the result of implementing the proposed amendments.

IX.c), d), & e) PAR 1469-related modifications would occur at existing facilities, that are typically located in developed areas, primarily industrial or commercial areas Typically, developed areas are already paved and the drainage patterns and infrastructures are already in place. Since PAR 1469 involves minor construction involving installation of air pollution control equipment within the boundaries of existing industrial facilities, no significant changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, implementing PAR 1469 is not expected generate water runoff impacts or alter drainage patterns in any way.

IX.g), h), i), & j) PAR 1469 does not induce construction of new housing or contribute to the construction of new building structures that could be adversely affected by 100-year flood hazards. Facility modifications and changes would occur at existing industrial facilities. If these facilities are subject to 100-year flood hazards, this is an existing condition and not an effect of implementing PAR 1469. Therefore, PAR 1469 is not expected to expose the public to any flood hazards or generate any flood hazards in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. As a result, PAR 1469 is not expected to expose people or structures to significant flooding risks. Finally, affected facilities are not typically located near the ocean or large inland bodies of water, inundation by seiche, tsunami or mudflow is not anticipated. Tsunamis at the ports, i.e., Port of Los Angeles and Port of Long Beach, are not expected because the ports of Long Beach and Los Angeles are surrounded by breakwaters that protect the area from wave action. As a result, these topics will not be further evaluated in this document.

IX.m) PAR 1469 will not increase storm water discharge, since minimal paving of unpaved areas is contemplated at affected facilities. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of PAR 1469. Accordingly, PAR 1469 is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon these considerations, significant hydrology and water quality impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this Draft EA. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
X.	**LAND USE AND PLANNING.** Would the project:			
a)	Physically divide an established community?	☐	☐	☑
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑
c)	Conflict with any applicable habitat conservation or natural community conservation plan?	☐	☐	☑

Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

Discussion

X.a) The proposed project would regulate metal finishing operations at existing industrial facilities. The expected options for compliance are add-on control equipment and the use of chemical fume suppressants. Since PAR 1469 affects existing facilities, it does not include any components that would require physically dividing an established community.

X.b) One provision that could potentially conflict with land use plans, policies, or regulations is the requirement in PAR 1469 that would prohibit the siting and construction of new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses. However, while land use and other planning considerations are typically determined by local governments, Government Code §65850.2 requires cities and counties that receive applications of development projects to comply with the requirements for a permit to construct or modification from the air quality management district exercising jurisdiction in their area. This means that even if the city or county currently has zoning requirements that would allow the siting and construction of new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses, the city or county would be required to defer to the SCAQMD to decide whether, and under what conditions, to allow construction at the site. Since Government Code §65850.2 already contains requirements that may limit construction of new facilities and requires the city or county to consider siting recommendations of the SCAQMD first, the provisions in PAR 1469 that affect land uses do not impose new requirements that are not already codified in state law. Based on the aforementioned discussion, no land use or planning requirements will be altered by regulating chromium emissions from metal finishing operations.

X.c) Since PAR 1469 would regulate hexavalent chromium emissions, PAR 1469 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Based upon these considerations, significant land use and planning impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this Draft EA. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
XI.	**MINERAL RESOURCES.** Would the project:			
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☑
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☑

Significance Criteria
Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:
- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion
XI.a) & b) There are no provisions in PAR 1469 that would result in the loss of availability of a known mineral resource, such as aggregate, shale, coal, etc., of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Based upon these aforementioned considerations, significant mineral resources impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this Draft EA. Since no significant mineral resources impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
XII.	**NOISE.** Would the project result in:			
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
f)	For a project within the vicinity of a private airship, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑

Significance Criteria

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion

XII.a) Construction activities associated with the installation of HEPA filtration systems in response to PAR 1469 will take place at facilities that are located in existing industrial or commercial settings. Construction activities are expected to occur primarily within the building of an affected facility. Further, construction equipment expected to be used to install HEPA filtration systems, e.g., air compressors and welders are generally not noise intensive equipment. Operation of HEPA filtration systems in industrial settings is not expected to expose persons to the generation of excessive noise levels above current facility levels because systems are typically within the building and the building's walls would be expected to substantially attenuate noise levels. It is also expected that any facility affected by PAR 1469 will comply with all existing noise control laws or ordinances. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA have established noise standards to protect worker health.

XII.b) The proposed project is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels because neither construction equipment nor HEPA filtration systems are considered to be noise intensive equipment or produce intrusive groundborne vibrations. As a result, the construction and operation noise levels at the affected facilities associated with the implementation of PAR 1469 are anticipated to be comparable to existing noise generating activities, within Occupational Safety and Health Administration (OSHA) worker safety standards, and are not expected to exceed existing noise control laws or ordinances.

XII.c) Due to the nature of the add-on control equipment (e.g., HEPA filtration systems), a permanent increase in ambient noise levels at the affected facilities above existing levels without the proposed project is unlikely to occur as part of PAR 1469. Noise levels resulting from the operation of the proposed project would be insignificant because HEPA filtration systems are

generally not noise intensive systems and are unlikely to raise ambient noise levels in the project vicinities to above a level of significance.

XII.d) A temporary or periodic increase in ambient noise levels in the vicinity of affected facilities above levels existing without the project is not anticipated from construction-related activities (e.g., installation of add-on controls) since these activities are short-term, no more than a few months at each facility; would involve a small amount of construction work, four hours per day; and utilize equipment that is not considered to be noise intensive equipment. Furthermore, it is anticipated that contractors hired to install add-on control equipment at affected facilities will comply with all local noise ordinances. Therefore, it is expected that the incremental noise levels would be less than significant.

XII.e) & f) The proposed project consists of improvements within industrial or commercial facilities. Even if an affected facility is located near a public/private airport, the noise expected from the installation of add-on controls would be unlikely to significantly interact with noise generated from a public/private airport. This conclusion is based on the fact that construction equipment expected to be used and HEPA filtration systems are not considered to be noise intensive. Thus, the PAR 1469 is not expected to expose people residing or working in the project vicinities to excessive noise levels.

Based upon these considerations, significant noise impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this Draft EA. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:			
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☑
	Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☑

Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Discussion

XIII.a) PAR 1469 is not anticipated to generate any significant effects, either direct or indirect, on the district's population or population distribution as no additional workers are anticipated to be required to comply with the implementation of these rules. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1469.

Though facility modifications are expected from the implementation of PAR 1469, these activities would occur within existing industrial or commercial facilities located typically in urbanized areas. It is expected that the existing labor pool in this urbanized area would accommodate the labor requirements for the installation and operation of add-on controls in these areas. Additionally, PAR 1469 is not expected to require affected facilities to hire additional personnel to operate and maintain any installed add-on control equipment. In the event that new employees are hired, it is expected that the amount of new employees at any one facility would be small. As such, PAR 1469 will not result in changes in population densities or induce significant growth in population.

XIII.b) & c) Independent of the modifications/changes expected to occur at existing industrial and commercial facilities, implementation of PAR 1469 is not anticipated to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people elsewhere.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this Draft EA. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			
a) Fire protection?	☐	☐	☑
b) Police protection?	☐	☐	☑
c) Schools?	☐	☐	☑
d) Parks?	☐	☐	☑
e) Other public facilities?	☐	☐	☑

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion

XIV.a) & b) Although facilities subject to PAR 1469 may install air pollution control equipment and use chemical fume suppressants, neither the HEPA filtration technology nor the nature or the amount of usage of chemical fume suppressants at any one facility would likely contribute to an increase in fires or explosions requiring additional responses by local fire departments. Furthermore, additional inspections at affected facilities associated with the air pollution control equipment and the use of chemical fume suppressants by city building departments or local fire departments are not expected. Similarly, since it is not expected that PAR 1469 would increase the likelihood of fires or explosions, additional police services for responding to such incidents would not be required. Finally, PAR 1469 is not expected to have any adverse effects on local police departments because enforcement of the rule will be the responsibility of the SCAQMD.

XIV.c) & d) The local labor pool (e.g., workforce) of a particular affected facility areas is expected to be adequate to fill the short-term construction positions associated with implementing PAR 1469. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

XIV.e) Implementation of PAR 1469 will result in the use of add-on control equipment and chemical fume suppressants. Besides permitting the equipment or altering permit conditions, there is no other need for government services. The proposal would not result in the need for

new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered government facilities.

Based upon these considerations, significant public services impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this Draft EA. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XV. RECREATION.			
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☑

Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

Discussion

XV.a) & b) Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by regulating emissions from metal finishing, chrome plating and chromic acid anodizing operations. Since PAR 1469 will not have any affect on population in the District, it is not expected to increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or expansion of existing recreational facilities that might have an adverse physical effect on the environment.

Based upon these considerations, significant recreation impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this Draft EA. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XVI. SOLID/HAZARDOUS WASTE. Would the project:			
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid and hazardous waste disposal needs?	☐	☑	☐
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☑	☐

Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

Discussion

XVI.a) & b)

Construction Impacts

During construction-related activities, there may be a potential for the creation of solid waste. The wastes would most likely consist of concrete, asphalt, wood, and metal debris from minor demolition and construction activities. In addition, if any of the existing HEPA systems are dismantled and disposed of or recycled, additional waste from dismantling activities would be generated during construction. However, it is expected that any construction debris, including the dismantled HEPA systems, would be disposed in an appropriate landfill or recycled. Currently, the estimated Class II (industrial) and Class III (municipal) landfill disposal capacity within the district is approximately 111,198 tons per day. Since any increase in solid waste disposal from PAR 1469 construction/demolition/dismantling activities would be small, it is anticipated that existing landfill capacity in the district can accommodate this temporary increase in solid waste products. Therefore, temporary significant solid waste impacts associated with PAR 1469 construction-related activities are not expected.

Operational Impacts

Once the HEPA filtrations systems are installed and process changes implemented (e.g., use of chemical fume suppressants), PAR 1469 could result in incremental increases in solid waste from operational activities. Therefore, the potential adverse impacts to disposal facilities are discussed below.

<u>HEPA Filtration Systems</u>

To comply with PAR 1469, generation of solid/hazardous waste due to the anticipated disposal of 492 spent HEPA filters is assumed to occur every year. As mentioned in the 'Air Quality' section, the typical dimensions of a HEPA filter is approximately two feet wide by two feet long

by four inches deep or 1.3 cubic feet. Therefore, disposal of 492 HEPA filters per year equates to approximately 640 cubic feet of hazardous waste per year. It should be noted that the amounts of solid waste generated from this process substantially overestimates solid waste impacts because HEPA filters can last up to two years or more, depending on the throughput.

There are no hazardous waste disposal sites with the district boundaries. Hazardous waste generated at district facilities is typically disposed of at licensed in-state hazardous waste disposal facilities. Two such facilities are the Chemical Waste Management, Inc. (CWMI) Kettleman Hills facility in Kings County and the Safety-Kleen facility in Buttonwillow in Kern County. Kettleman Hills has an estimated 6.5 million cubic yard capacity and expects to continue receiving wastes for approximately 18 years under its current permit, or for approximately another 24 years with an approved permit modification. Buttonwillow receives approximately 960 tons of hazardous waste per day and has a remaining capacity of approximately 10.3 million tons. The expected life of the Buttonwillow facility is approximately 35 years. Based upon these hazardous waste disposal capacities, the disposal of an addition 101 cubic feet of hazardous waste per year is not considered to be a significant adverse impact to existing hazardous waste disposal facilities.

Use of Chemical Fume Suppressants

Solid or hazardous waste impacts are not expected from the use of chemical fume suppressants in metal plating and anodizing tanks because chemical fume suppressants originate in a liquid rather than a solid form and they do not contain any hazardous materials. Therefore, in a liquid state, any handling, such as pretreating, recycling or disposal into the sanitary sewer system or storm drains, would constitute a water quality impact. Refer to the analysis in the "Hydrology/Water Quality" section.

Based on the above analyses, PAR 1469 is not expected to substantially increase the volume of solid or hazardous wastes from metal finishing operations that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PAR 1469 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
XVII. TRANSPORTATION/TRAFFIC. Would the project:			
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☑
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☑
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☑
e)	Result in inadequate emergency access or?	☐	☐	☑
f)	Result in inadequate parking capacity?	☐	☐	☑
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☑

Significance Criteria

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

Discussion

XVII.a) & b)

Construction Impacts
During construction-related activities, PAR 1469 could potentially create a temporary increase in traffic in the immediate vicinity of the affected facilities during peak commute periods. Increased traffic related to construction is related to construction worker commute trips and delivery trucks accessing the affected facilities during peak commute periods.

"Worst-case" construction-related activities associated with the implementation PAR 1469 (e.g., installation of add-on controls) is expected to generate eight additional vehicle trips (four round trips) per facility from construction worker daily commutes and one heavy-duty delivery truck trip. However, these trips are temporary and are dispersed throughout the district. These trips do not exceed the SCAQMD's significance criteria of 350 additional trips per facility. Further, it is not expected that eight additional trips would increase the volume to capacity ratio of any intersections in the vicinity of the affected facility by two percent or more, which is another indicator of traffic impacts from a project.

The minor increase in commute and delivery trips is not anticipated to result in significant adverse changes to existing transit systems or transportation corridors. Existing transit systems in the district will not be diminished, eliminated or affected in any way as a result of the implementation of PAR 1469. Therefore, the implementation of PAR 1469 will not result in any significant adverse transportation/traffic impacts.

Operational Impacts
Once the construction-related activities cease, incremental transportation/traffic impacts are not expected from operational-related activities. As mentioned earlier, affected facilities are not expected to hire additional personnel to operate and maintain add-on controls. Furthermore, trips associated with the disposal of spent HEPA filters are expected to be incorporated into the current waste disposal schedule and delivery trips associated with acquiring fresh HEPA filters will occur once a year per facility. These trips will be infrequent and dispersed throughout the district. Therefore, additional operational-related trips are not anticipated to be significant.

In summary, PAR 1469 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

XVII.c) PAR 1469 will involve the installation of add-on controls at existing facilities. The installed add-on controls are expected to be similar in height and appearance to the existing structures and are therefore not expected to adversely affect air traffic patterns. Accordingly, no increase in air traffic is expected. As a result of the project, this impact issue is not further evaluated in this Draft EA.

XVII.d) PAR 1469 will involve the installation of add-on controls at existing facilities. No offsite modifications to roadways are anticipated for the proposed project that would result in an additional roadway design hazard or incompatible uses. Consequently, this impact issue is not further evaluated in this Draft EA.

XVII.e) PAR 1469 will involve the installation of add-on controls at existing facilities with no changes expected to emergency access at or in the vicinity of the affected facilities. Therefore, the project is not expected to adversely impact emergency access and this impact issue is not further evaluated in this Draft EA.

XVII.f) Additional parking will be required for construction workers during the construction phase of PAR 1469. Since construction crews at the individual facilities will be small, sufficient parking space is expected to be available within the facility boundaries or on adjacent roadways. In addition, no increases in employees during operation at affected facilities are anticipated. Therefore, the project is not expected to result in inadequate offsite parking. This impact issue is not further evaluated in this Draft EA.

XVII.g) Facility modifications or changes associated with PAR 1469 will take place at existing facilities and will not result in conflicts with alternative transportation, such as bus turnouts, bicycle racks, etc.. Therefore, this impact issue is not further evaluated in this Draft EA.

Based upon these considerations, PAR 1469 is not expected to generate significant adverse transportation/traffic impacts and, therefore, this topic will not be considered further. Since no significant transportation/traffic impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
XVIII.	**MANDATORY FINDINGS OF SIGNIFICANCE.**			
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☑
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☑
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑

XVIII.a) As discussed in the "Biological Resources" section, PAR 1469 is not expected to adversely affect plant or animal species or the habitat on which they rely because the affected equipment or processes are located at existing facilities in industrial or commercial areas which have already been greatly disturbed and that currently do not support such habitats. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the facilities affected by PAR 1469.

XVIII.b) Based on the foregoing analyses, since PAR 1469 will not result in project-specific significant environmental impacts, implementation of PAR 1469 is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Related projects to the currently proposed project include existing and proposed rules and regulations, as well as AQMP control measures, and measures identified in the Air Toxics Control Plan (ATCP). The effects of PAR 1469 will not be "cumulatively considerable" because project-specific impacts do not exceed any significance criteria used by the SCAQMD. For example, the environmental topics checked 'No Impact' (e.g., aesthetics, agriculture resources, biological resources, cultural resources, geology and soils, land use and planning, mineral resources, noise, population and housing, public services, recreation, and transportation and traffic) would not be expected to make any contribution to potential cumulative impacts whatsoever. For the environmental topics checked 'Less than Significant Impact' (e.g., air quality, energy, hazards and hazardous materials, hydrology and water quality, and solid/hazardous waste), the analysis indicated that project impacts would not exceed any project-specific significance thresholds. This conclusion is based on the fact that the analyses for each of these environmental areas concluded that the incremental effects of the proposed project would be minor and, therefore, not considered to be cumulatively considerable. Also, in the case of air quality impacts, the net effect of implementing the proposed project with other proposed rules and regulations, AQMP control measures, and ATCP measures is an overall reduction in district-wide emissions leading to the attainment of state and national ambient air quality standards. Therefore, the potential for significant cumulative or cumulatively considerable impacts is not further evaluated in this Draft EA.

XVIII.c) Based on the foregoing analyses, PAR 1469 is not expected to cause adverse effects on human beings. Significant air quality, energy, hazards and hazardous materials, hydrology and water quality, solid/hazardous waste, and transportation/traffic are not expected from the implementation of PAR 1469. The direct impact from the proposed project, however, is a reduction of cancer risk to less than 25 in one million for most facilities affected by PAR 1469, and thus, there is an overall air quality benefit.

No impacts to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, land use/planning, mineral resources, noise, population and housing, pubic services, and recreation are expected as a result of the implementation of PAR 1469. Therefore, these environmental issues will not be further analyzed in this Draft EA.

As discussed in items I through XVIII above, the proposed project has no potential to cause significant adverse environmental effects.

APPENDIX A

PROPOSED AMENDED RULE 1469: HEXAVALENT CHROMIUM EMISSIONS FROM CHROMIUM ELECTROPLATING AND CHROMIC ACID ANODIZING OPERATIONS

PROPOSED AMENDED RULE 1469. **HEXAVALENT CHROMIUM EMISSIONS FROM CHROMIUM~~E~~ ELECTROPLATING AND CHROMIC ACID ANODIZING OPERATIONS**

(a) Applicability

(1) This rule shall apply to the owner or operator of any facility ~~each chromium electroplating or chromic acid anodizing tank at facilities~~ performing ~~hard chromium electroplating, decorative~~ chromium electroplating~~,~~ or chromic acid anodizing. Compliance with this rule shall be in addition to other applicable rules, such as Rule 1401 – New Source Review of Toxic Air Contaminants

(2) Any person who sells, supplies, offers for sale, uses, or manufactures for sale in the District a chromium electroplating or chromic acid anodizing kit.

(b) Definitions

For the purposes of this rule, the following definitions shall apply:

(1) ADD-ON AIR POLLUTION CONTROL DEVICE~~EQUIPMENT~~ means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tank(s).

(2) AIR POLLUTION CONTROL TECHNIQUE means any method, such as an add-on air pollution control device~~equipment~~, mechanical fume suppressant or a chemical fume suppressant, that is used to reduce chromium emissions from chromium electroplating and chromic acid anodizing tanks.

(3) AMPERE-HOURS means the integral of electrical current applied to an electroplating tank (amperes) over a period of time (hours).

(4) ANNUAL PERMITTED AMPERE-HOURS means the maximum allowable chromium electroplating or anodizing rectifier production in ampere-hours, on an annual basis as specified in the Permit to Operate, Permit to Construct, or Compliance Plan for the facility.

(5~~4~~) AREA SOURCE means any stationary source of hazardous air pollutants that is not a major source as defined in this rule.

(65) BASE ~~METAL~~MATERIAL means the metal, ~~or~~ metal alloy, or plastic that comprises the workpiece.

(76) BATH COMPONENT means the trade or brand name of each component~~(s)~~ in trivalent chromium electroplating baths, including the chemical name of the wetting agent contained in that component.

(87) BREAKDOWN means an unforeseeable impairment of an air pollution control device~~equipment~~ or related operating equipment which causes a violation of any emission limitation or restriction prescribed by this rule or by State law and which: is not the result of neglect or disregard of any air pollution control law, rule, or regulation; is not intentional or the result of negligence, or improper maintenance; is not a recurrent breakdown of the same equipment; and, does not constitute a nuisance as defined in the State of California Health and Safety Code, Section 41700, with the burden of proving the criteria of this section placed upon the person seeking to come under the provisions of this law.

(98) CHEMICAL FUME SUPPRESSANT means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath; another term for fume suppressant is mist suppressant.

(109) CHROMIC ACID means the common name for chromium anhydride (CrO_3).

(110) CHROMIC ACID ANODIZING means the electrolytic process by which an oxide layer is produced on the surface of a base ~~metal~~ material for functional purposes (e.g., corrosion resistance or electrical insulation) using a chromic acid solution. In chromic acid anodizing, the part to be anodized acts as the anode in the electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

(121) CHROMIUM ELECTROPLATING OR CHROMIC ACID ANODIZING TANK means the receptacle or container in which hard or decorative chromium electroplating or chromic acid anodizing occurs.

(132) COMPOSITE MESH-PAD SYSTEM means an add-on air pollution control device~~equipment~~ typically consisting of several mesh-pad stages. The purpose of the first stage is to remove large particles. Smaller particles are removed in the second stage, which consists of the composite mesh pad. A final stage may remove any re-entrained particles not collected by the composite mesh pad.

(143) DECORATIVE CHROMIUM ELECTROPLATING means the process by which a thin layer of chromium (typically 0.003 to 2.5 microns) is electrodeposited on a base metal, plastic, or undercoating to provide a bright surface with wear and tarnish resistance. In this process, the part(s) serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Typical current density applied during this process ranges from 540 to 2,400 Amperes per square meter (A/m^2) for total electroplating times ranging between 0.5 to 5 minutes.

(15) DRAGOUT means fluid containing hexavalent chromium that drips off from parts being electroplated or anodized, or from equipment used to remove electroplated or anodized parts from a tank.

(164) ELECTROPLATING OR ANODIZING BATH means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purpose of electroplating metal out of the solution onto a workpiece or for oxidizing the base material.

(175) EMISSION LIMITATION means, for the purposes of this rule, the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm), or the allowable surface tension expressed in dynes per centimeter (dynes/cm) for decorative chromium electroplating and chromic acid anodizing tanks; and the milligrams of hexavalent chromium per ampere-hour (mg/amp-hr) of electrical current applied to the electroplating tank for hard or decorative chromium electroplating tanks or chromic acid anodizing tanks, or mass emission rate.

(186) ENCLOSED STORAGE AREA is any space or structure used to contain material that prevents its contents from being emitted into the atmosphere.

(19) EXISTING FACILITY means a facility that is in operation before October 24, 2007.

(1720) FACILITY means the major or area source at which chromium electroplating or chromic acid anodizing is performed and/or any source or group of sources or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS)

source as determined in 40 CFR Section 55.2. Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility. Sources or installations involved in crude oil and gas production in Southern California Coastal or OCS Waters and transport of such crude oil and gas in Southern California Coastal or OCS Waters shall be included in the same facility which is under the same ownership or use entitlement as the crude oil and gas production facility on-shore.

(~~18~~2 1) FIBER-BED MIST ELIMINATOR means an add-on air pollution control device~~equipment~~ that removes contaminants from a gas stream through the mechanisms of inertial impaction and Brownian diffusion. This device~~equipment~~ is typically installed downstream of another control device, which serves to prevent plugging, and consists of one or more fiber beds. Each bed consists of a hollow cylinder formed from two concentric screens; the fiber between the screens may be fabricated from glass, ceramic, plastic, or metal.

(~~19~~2 2) FOAM BLANKET means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution.

(~~20~~2 3) FRESH WATER means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

(~~21~~2 4) FUGITIVE DUST, for the purpose of this rule means any solid particulate matter containing hexavalent chromium that becomes airborne by natural or man-made activities, excluding particulate matter emitted from an exhaust stack.

(~~22~~2 5) HARD CHROMIUM ELECTROPLATING or INDUSTRIAL CHROMIUM ELECTROPLATING means a process by which a thick layer of chromium (typically greater than 1.0 microns) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness, and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 A/m^2 for total electroplating times ranging from 20

minutes to 36 hours depending upon the desired plate thickness.

(~~23~~2 6) HEXAVALENT CHROMIUM means the form of chromium in a valence state of +6.

(~~24~~2 7) HIGH EFFICIENCY PARTICULATE ARRESTORS (HEPA) means filter(s) rated at 99.97 percent or more efficient in collecting particle sizes 0.3 microns or larger.

~~(25) LARGE, HARD CHROMIUM ELECTROPLATING FACILITY means a facility that performs hard chromium electroplating and emits greater than or equal to 10 pounds per year (lbs/yr) controlled emissions of hexavalent chromium.~~

(2~~8~~6) LEAK means the release of chromium emissions from any opening in the emission collection system prior to exiting the emission control device.

(2~~9~~7) MAJOR SOURCE means any stationary source or group of stationary sources located within a contiguous area and under common control that emits, or has the potential to emit, considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

(30~~2~~ ~~8~~) MAXIMUM CUMULATIVE POTENTIAL RECTIFIER CAPACITY means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70 percent of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

(31~~2~~ ~~9~~) MECHANICAL FUME SUPPRESSANT means any device that reduces fumes or mist at the surfaces of an electroplating or anodizing bath by direct contact with the surface of the bath. Polyballs are the most commonly used mechanical fume suppressant.

~~(30) MEDIUM, HARD CHROMIUM ELECTROPLATING FACILITY means a facility that performs hard chromium electroplating and emits greater than 2 pounds per year (lbs/yr) but less than 10 pounds per year (lbs/yr) controlled emissions of hexavalent chromium.~~

(32~~1~~) MODIFICATION means either:

(A) any physical change in, change in method of operation of, or

addition to an existing permit unit subject to this rule that requires an application for a permit to construct and/or operate and results in an increase in hexavalent chromium emissions. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

(i) an increase in the production rate, unless such increases will cause the maximum design capacity of the equipment to be exceeded; or

(ii) an increase in the hours of operation; or

(iii) a change in ownership of a source; or

(iv) an increase in the annual ampere-hours, unless such increase will cause a facility to be subject to a different requirement in Table 2 of paragraph (c)(11); or

(B) the addition of any new chromium electroplating or anodizing tank~~permit unit~~ at an existing ~~source~~facility which increases hexavalent chromium emissions; or

(C) the fixed capital cost of the replacement of components exceeding 50 percent of the fixed capital cost that would be required to construct a comparable new source.

(33) MODIFIED FACILITY means any facility which has undergone a modification on or after October 24, 2007.

(34) NEW FACILITY means any facility that begins initial operations on or after October 24, 2007. "New Facility" does not include the installation of a new chromium plating or anodizing tank at an existing facility or the modification of an existing facility.

(35~~2~~) OPERATING PARAMETER VALUE means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in continual compliance with the applicable emission limitation or standard.

(36~~3~~) PACKED-BED SCRUBBER means an add-on air pollution control device~~equipment~~ consisting of a single or double packed-bed that contains packing media on which the chromic acid droplets impinge. The packed-bed section of the scrubber is followed by a mist eliminator to

remove any water entrained from the packed-bed section.

(374) RESPONSIBLE OFFICIAL means one of the following:

(A) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the U. S. EPA Administrator.

(B) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(C) For a municipality, state, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the U.S. Environmental Protection Agency [U.S. EPA]).

(D) For sources (as defined in this rule) applying for or subject to a Title V permit: "responsible official" shall have the same meaning as defined in District's Regulation XXX.

(38) SCHOOL means any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including in kindergarten and grades 1 through 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property.

(39) SCHOOL UNDER CONSTRUCTION means any property that meets any of the following conditions.

(A) construction of a school has commenced; or

(B) a CEQA Notice for the construction of a school has been issued; or

(C) a school has been identified in an approved local government specific plan.

~~(35) SMALL, HARD CHROMIUM ELECTROPLATING FACILITY means a facility that performs hard chromium electroplating and emits less than or equal to 2 pounds per year (lbs/yr) controlled emissions.~~

(~~36~~4<u>0</u>) SENSITIVE RECEPTOR ~~includes schools (kindergarten through grade 12), licensed daycare centers, hospitals, and convalescent homes~~means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

(~~37~~4<u>1</u>) SOURCE means any chromium electroplating or chromic acid anodizing operation and any equipment or materials associated with the selected associated air pollution control technique.

(~~38~~4<u>2</u>) STALAGMOMETER means a device used to measure the surface tension of a solution by determining the number of drops, or the weight of each drop, in a given volume of liquid.

(43) SUBSTANTIAL USE of a permit to construct means one or more of the following:

(A) the equipment that constitutes the source has been purchased or acquired;

(B) construction activities, other than grading or installation of utilities or foundations, have begun and are continuing; or

(C) a contract to complete construction of the source within one year has been entered into.

(~~39~~4<u>4</u>) SURFACE TENSION means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

(~~40~~4<u>5</u>) TANK OPERATION means the time in which current and/or voltage is being applied to a chromium electroplating tank or a chromic acid anodizing tank.

(~~41~~4<u>6</u>) TENSIOMETER means a device used to measure the surface tension of a

6) solution by measuring the force necessary to pull a filament or ring from the surface of a liquid.

(4247) TRIVALENT CHROMIUM means the form of chromium in a valence state of +3.

(4348) TRIVALENT CHROMIUM PROCESS means the process used for electrodeposition of a thin layer of chromium onto a base material using a trivalent chromium solution instead of a chromic acid solution.

(4449) WEEKLY means at least once every seven calendar days.

(4550) WETTING AGENT means the type of chemical fume suppressant that reduces the surface tension of a liquid.

(c) Requirements

~~(1) The owner or operator of any source shall meet the requirements of the Airborne Toxic Control Measure (ATCM) for Emissions of Hexavalent Chromium from Chrome Plating and Chromic Acid Anodizing Operations, and the National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks until this rule is fully implemented.~~

(21) The owner or operator of a ~~hexavalent chrome~~ chromium electroplating tank, chromic acid anodizing tank, or group of such tanks, shall equip each tank with a continuous recording, non-resettable, ampere-hour meter that operates on the electrical power lines connected to the tank or group of tanks. A separate meter shall be hard wired for each rectifier.

(32) ~~On or before May 2, 2004, t~~The owner or operator of a source with any electroplating or anodizing tank using a wetting agent chemical fume suppressant shall use only wetting agent chemical fume suppressants certified pursuant to subdivision (f).

(43) No hexavalent chromiume electroplating or chromic acid anodizing tank shall be air sparged when electroplating is not occurring, or while chromic acid is being added.

(54) Housekeeping ~~Practices~~Requirements:

~~On and after July 1, 2003, housekeeping practices shall be implemented to reduce emissions of hexavalent chromium caused by the storage, handling and transport of chromic acid and sludge containing hexavalent chromium at a facility. At a minimum, the following practices shall be~~

~~implemented~~An owner or operator of a hexavalent chromium electroplating or chromic acid anodizing facility shall:

(A) Store ~~C~~chromic acid powder or flakes, or other substances that may contain hexavalent chromium, ~~shall be stored~~ in a closed container in an enclosed storage area when not in use;

(B) Use a closed container when transporting ~~C~~chromic acid powder or flakes ~~shall be transported~~ from an enclosed storage area to electroplating or anodizing tanks ~~in a closed container~~;

(C) ~~Sludge~~ Clean up or contain any liquid or solid material that may contain~~s~~ hexavalent chromium that is spilled ~~shall be cleaned up or contained~~ immediately and no longer than~~within~~ one hour after being spilled~~, to minimize trackout~~;

(D) Clean ~~S~~surfaces within the enclosed storage area, open floor area, walkways around the electroplating or anodizing tank(s), or any surface potentially contaminated with hexavalent chromium or surfaces that potentially ~~that~~ accumulate dust ~~shall be washed down,~~ at least once every seven days in one or more of the following manners: HEPA vacuumed, hand wiped with a damp cloth,~~or~~ wet mopped, or ~~shall be~~ maintained with the use of non-toxic chemical dust suppressants; and

(E) Store, dispose of, recover, or recycle ~~C~~chromium or chromium-containing wastes generated from housekeeping activities ~~shall be stored, disposed of, recovered, or recycled~~ using practices that do not lead to fugitive dust and in accordance with hazardous waste requirements.

(F) Install a physical barrier to separate the buffing, grinding, or polishing area within a facility from the hexavalent chromium electroplating or anodizing operation. The barrier may take the form of plastic strip curtains.

(G) Compressed air cleaning operations shall not be conducted at or adjacent to the hexavalent chromium electroplating or anodizing operations.

(H) Minimize dragout outside of the electroplating or anodizing tank(s) by implementing the following practices:

(i) Facilities with automated lines shall have drip trays installed between tanks so that the liquid does not fall

through the space between tanks. Trays shall be placed such that the liquid is captured and returned to the tank(s), and cleaned such that there is no accumulation of visible dust potentially contaminated with hexavalent chromium.

(ii) Facilities without automated lines shall handle each electroplated or anodized part, or equipment used to handle such parts, so that chromic acid is not dripped outside the electroplating or anodizing tanks, including associated process tanks. Facilities spraying down parts over the electroplating or anodizing tank(s) to remove excess chromic acid shall have a splash guard installed at the tank to minimize overspray and to ensure that any hexavalent chromium laden liquid is captured and returned to the electroplating or anodizing tank. Splash guards shall be cleaned such that there is no accumulation of visible dust potentially contaminated with hexavalent chromium.

(~~6~~5) Add-on air pollution control device(s)~~equipment~~ for hard or decorative chromium~~e~~ electroplating or chromic acid anodizing tanks ~~required or installed prior to May 2, 2003~~ shall not be removed or rendered inoperable unless it is replaced by air pollution control techniques meeting a higher control efficiency than previously achieved, or an emission rate of 0.0015 milligrams per ampere-hour or less, whichever control efficiency is more effective, as demonstrated by a performance test conducted pursuant to subdivision (e), or unless the facility is operating under an approved alternative compliance method pursuant to subparagraph (d)(6).

(~~7~~6) Add-On Control Requirement for Hard Chromium~~e~~ Electroplating Tanks

During tank operation, each owner or operator of an existing, modified or new source, except facilities that have applied for and received approval for an alternative compliance option pursuant to subparagraph (d)(6) or an existing ~~small~~ operation~~s~~ that has~~ve~~ applied for and received approval for an interim alternative requirement as specified in paragraph (d)(5), shall control hexavalent chromium emissions discharged to the atmosphere from that source by reducing the hexavalent chromium emissions using an add-on air pollution control device~~equipment~~.

(7) Training and Certification

(A) Chromium electroplating personnel responsible for environmental compliance, maintaining electroplating bath chemistries, and testing and recording electroplating bath surface tension data shall complete a District-approved training program every two years. Initial training shall have been completed prior to May 1, 2004 for facilities existing before that time. For new facilities, initial training must be completed within a period not to exceed two years of start-up.

(B) Only persons who have completed a District-approved training program and have received a certification issued by the District shall be responsible for recordkeeping associated with environmental compliance, maintaining electroplating bath chemistries, and testing and recording electroplating bath surface tension data.

(C) Notwithstanding subparagraph (c)(7)(B), in the event that all persons who have completed a District-approved training program leave employment at a facility, the owner or operator may be responsible for recordkeeping associated with environmental compliance, maintaining electroplating bath chemistries, and testing and recording electroplating bath surface tension data for a period not to exceed two years.

(8) Interim Emission Standards for Existing Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities Located 25 Meters or Less from a ~~Sensitive Receptor~~ Licensed Daycare, Hospital, Convalescent Home, or a Residence, or Located 100 Meters or Less from an Existing, as of May 2, 2003, School ~~(Kindergarten through Grade 12)~~. The following emission limitations shall be in effect until the limits of paragraph (c)(11) become effective.

~~The owner or operator shall:~~

(A) ~~On or before May 1, 2005, r~~The owner or operator shall reduce hexavalent chromium emissions to an emission limitation of 0.0015 milligram or less per ampere-hour for each tank, as measured after add-on controls, if any; or

(B) ~~C~~The owner or operator shall comply with any applicable interim

alternative compliance option, as specified in ~~subdivision~~ paragraphs (d)(1) through (d)(5).

(9) Interim Emission Standards for Existing Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities Located More than 25 Meters from a ~~Sensitive Receptor~~Licensed Daycare, Hospital, Convalescent Home, or a Residence, and More than 100 Meters from an Existing, as of May 2, 2003, School.

The following emission limitations shall be in effect until the limits of paragraph (c)(11) become effective.

(A) ~~On or before May 1, 2005, the owner or operator shall r~~The owner or operator shall reduce hexavalent chromium emissions to an emission limitation of:

(i) 0.01 milligrams or less per ampere-hour for each tank, as measured after add-on controls, if any, when actual consumption of electrical current used by the facility for electroplating or anodizing tanks subject to this rule is less than the threshold given in Table 1, for the appropriate operating scenario and operating schedule, or the applicable distance-adjusted ampere-hour level as specified in Appendix 7; or

(ii) 0.0015 milligrams or less per ampere-hour for each tank, as measured after add-on controls, if any, when actual consumption of electrical current used by the facility for electroplating or anodizing tanks subject to this rule exceeds the threshold given in Table 1, for the appropriate facility operating scenario and regular operating schedule, or the applicable distance-adjusted ampere-hour level as specified in Appendix 7; or

(B) The owner or operator shall ~~C~~comply with any applicable interim alternative compliance option, as specified in ~~subdivision~~ paragraphs (d)(1) through (d)(5).

Table 1
Ampere-Hour Thresholds for Facilities Located More than 25 Meters from a Sensitive Receptor or a Residence

Operating Scenario	Regular Operating Schedule	Ampere-Hour Threshold
Vented to Air Pollution Control Device~~Equipment~~	More than 12 hours per day	1,800,000 ampere-hours/yr
Vented to Air Pollution Control Device~~Equipment~~	12 hours per day or less	1,600,000 ampere-hours/yr
Not Vented to Air Pollution Control Device~~Equipment~~	Any	1,150,000 ampere-hours/yr

(10) Interim Emission Standards for Existing Facilities Conducting Multiple Hexavalent Chromium~~e~~ ~~P~~Electroplating Processes or Anodizing Processes

(A) For any facility subject to paragraph (c)(9) where a combination of hexavalent chromium electroplating or chromic acid anodizing is conducted, the owner or operator shall comply with an emission limitation in lieu of the one specified in paragraph (c)(9). The emission limitation shall be determined by calculating weighted facility energy consumption over any calendar year, using the following equation:

$$\text{Weighting Factor} = \frac{\text{Tanks Vented to APC Operating} > 12 \text{ hrs/day (Amp-hrs/yr)}}{(1)} + \frac{\text{Tanks Vented to APC Operating} \leq 12 \text{ hrs/day (Amp-hrs/yr)}}{(2)} + \frac{\text{Tanks Not Vented to APC (Amp-hrs/yr)}}{(3)}$$

Where:

(1) = 1,800,000 ampere-hours per year or applicable distance-adjusted ampere-hour level as specified in Appendix 7.

(2) = 1,600,000 ampere-hours per year or applicable distance-adjusted ampere-hour level as specified in Appendix 7.

(3) = 1,150,000 ampere-hours per year or applicable distance-adjusted ampere-hour level as specified in Appendix 7.

(~~A~~B) If weighted source energy consumption is less than or equal to 1, the applicable emission limitation shall be 0.01 milligram or less per ampere-hour for each tank

(~~B~~C) If weighted source energy consumption is greater than 1, the applicable emission limitation shall be 0.0015 milligram or less per ampere-hour for each tank, as measured after add-on controls, if any.

(11) Emission Standards for Existing Hexavalent Hard and Decorative Chromium Electroplating and Chromic Acid Anodizing Facilities beginning October 24, 2007

(A) The owner or operator of an existing facility shall control hexavalent chromium emissions discharged to the atmosphere by meeting the requirements identified below in Table 2. Alternatively, a facility can choose to comply by operating under an approved alternative compliance method pursuant to subparagraph (d)(6).

Table 2: Hexavalent Chromium Emission Limits for Existing Tanks

Distance to Sensitive Receptor (meters)	**Annual Permitted Ampere-hours**	**Emission Limit (mg/amp-hr)**	**Effective Date**
< 100	< 20,000	0.01[2]	4/24/2008
< 100	> 20,000 and < 200,000	0.0015[1]	10/24/2010
< 100	> 200,000	0.0015[1]	10/24/2009
> 100	< 50,000	0.01[2]	4/24/2008
> 100	> 50,000 and < 500,000	0.0015	10/24/2011
> 100	> 500,000	0.0015[1]	10/24/2009

[1] Measured after add-on air pollution control device(s).

[2] Achieved through use of Certified Chemical Fume Suppressants. Alternatively, a facility may install an add-on air pollution control device(s) that controls emissions to below 0.0015 mg/amp-hr.

(B) The owner or operator of an existing facility shall submit by November 24, 2007, a notification to the District providing distance(s) to the nearest sensitive receptor. Distances shall be measured as follows:

(i) For facilities that do not have an add-on air pollution control device on October 24, 2007, the measurement shall be the distance, rounded to the nearest foot, from the edge of the hexavalent chromium electroplating or anodizing tank

nearest the sensitive receptor to the property line of the nearest sensitive receptor that exists on October 24, 2007.

(ii) For facilities with an add-on air pollution control device on October 24, 2007, the measurement shall be the distance, rounded to the nearest foot, from the centroid of the stack to the property line of the nearest sensitive receptor that exists on October 24, 2007.

(C) Health Risk Assessment

(i) The owner or operator of an existing facility shall conduct a health risk assessment if annual hexavalent chromium emissions from the chromium electroplating or chromic acid anodizing operations exceed 15 grams in any calendar year beginning January 1, 2007.

(ii) The health risk assessment shall be conducted in accordance with Rule 1402 subdivision (d). The owner or operator shall submit the health risk assessment to the Executive Officer within 150 days of the end of the calendar year during which the facility's hexavalent chromium emissions exceeded 15 grams.

(iii) The owner or operator may comply with clause (c)(11)(C)(i) by using a health risk assessment previously approved by the District that:

(I) Was conducted using the most current version of the risk assessment procedures of District Rule 1402, subdivision (d); and

(II) Is representative of the chromium electroplating or chromic acid anodizing operating conditions for the subject year; and

(III) Was calculated using an annual hexavalent chromium emission amount that is equal to or greater than the amount of the subject year; and

(IV) Used receptor locations and distances equal to those for the subject year.

(12) Modified Hexavalent Chromium Electroplating or Chromic Acid Anodizing Facilities

(A) The owner or operator of a modified facility shall, upon start-up of

modification, control hexavalent chromium emissions from the electroplating or anodizing tank(s) by:

(i) Using an add-on air pollution control device(s) to control hexavalent chromium emission, and

(ii) Meeting an emission limit of 0.0015 milligrams per ampere-hour or less.

(B) Prior to initial start-up of modification, when annual emissions of hexavalent chromium are expected to exceed 15 grams per calendar year, the owner or operator shall conduct a health risk assessment in accordance with the Risk Assessment Procedures of District Rules 1401 and 1402. The owner or operator shall submit the health risk assessment to the District 60 calendar days prior to initial start-up of modification.

(C) A facility is not required to comply with clause (c)(12)(A)(i) if the facility is operating under an approved alternative method pursuant to subparagraph (d)(6).

(13) New Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities

(A) No person shall operate a new facility unless it is:

(i) Located outside of an area that is zoned for residential or mixed use; and

(ii) Located, as determined by the District, at least 1,000 feet from the boundary of a sensitive receptor, a school under construction, or any area that is zoned for residential or mixed use.

(B) A new facility shall be deemed to meet the requirements specified in paragraph (c)(13) if one of the following criteria is met, even if the facility does not meet the requirement at the time of initial start-up (e.g., because of a zoning change that occurs after the permit to construct is issued):

(i) The requirements specified in paragraph (c)(13) are met at the time a permit to construct is issued by the District, and substantial use of the permit to construct takes place within one year after it is issued; or

(ii) The requirements specified in paragraph (c)(13) are met at the time a permit to construct is issued by the District, and

substantial use of the permit to construct takes place before any zoning change occurs that affects the operation's ability to meet the requirement at the time of initial start-up.

(C) During tank operation, each owner or operator of a new facility shall, at a minimum, reduce hexavalent chromium emissions discharged to the atmosphere from the electroplating or anodizing tank(s) by:

(i) Installing a HEPA add-on air pollution control device; and

(ii) Using a certified chemical fume suppressant pursuant to subdivision (g); and

(iii) Meeting a hexavalent chromium emission rate of < 0.0011 milligrams/ampere-hour as measured after the HEPA add-on air pollution control device.

(D) Prior to initial start-up, the owner or operator of a new facility shall conduct a health risk assessment in accordance with the Risk Assessment Procedures of District Rules 1401 and 1402. The owner or operator shall submit the health risk assessment to the District 60 calendar days prior to initial start-up.

(E) Prior to initial start-up, the owner or operator of a new facility shall demonstrate to the District that the new facility meets the requirements specified in paragraph (c)(13).

(F) A facility is not required to comply with the requirement of subparagraph (c)(13)(C)(i) to install a HEPA add-on air pollution control device if the facility is operating under an approved alternative method pursuant to subparagraph (d)(6).

(14~~1~~) Decorative Chromium Electroplating Tanks Using a Trivalent Chromium Bath

(A) During tank operation, ~~each~~the owner or operator of an existing, modified, or new facility~~source~~ shall control chromium emissions discharged to the atmosphere by meeting ~~any~~one or more of the requirements identified below.

Method of compliance	Requirement
Add-on air pollution control device~~equipment~~, or chemical fume suppressants forming a foam blanket, or mechanical fume suppressants (i.e. polyballs)	≤ 0.01 milligrams per dry standard cubic meter of air (mg/dscm) ($4.4x10^{-6}$ gr/dscf)
Chemical fume suppressants containing a wetting agent	Use wetting agent as bath ingredient and comply with recordkeeping and reporting provisions of paragraphs (j)(9) and (k)(5).

(B) New facilities that perform electroplating using a trivalent chromium bath must conduct a facility wide health risk assessment in accordance with the procedures of District Rules 1401 and 1402. The health risk assessment shall be conducted and submitted in writing to the District 60 calendar days prior to initial start-up.

~~(12) Training and Certification~~

~~(A) Chrome plating personnel responsible for environmental compliance, maintaining plating bath chemistries, and testing and recording plating bath surface tension data shall complete a District-approved training program every two years. Initial training shall occur prior to May 1, 2004.~~

~~(B) On or after May 1, 2004, only persons who have completed a District-approved training program and have received a certification issued by the District shall be responsible for recordkeeping associated with environmental compliance, maintaining plating bath chemistries, and testing and recording plating bath surface tension data.~~

~~(C) Notwithstanding subparagraph (e)(12)(B), in the event that all persons who have completed a District-approved training program leave employment at a facility, the owner or operator may be responsible for recordkeeping associated with environmental compliance, maintaining plating bath chemistries, and testing and recording plating bath surface tension data for a period not to exceed two years.~~

(13) Interim Standards for Hexavalent Chrome Electroplating and Chromic Acid Anodizing Facilities

The following emission limitations shall be in effect until full compliance with paragraphs (c)(8), (c)(9), (c)(10), or (d)(5) is achieved:

(A) Hard Chrome Electroplating Operations

During tank operation, each owner or operator of an existing, modified or new source shall control hexavalent chromium emissions discharged to the atmosphere from that source by reducing the hexavalent chromium emissions from the add-on air pollution control equipment serving the electroplating tank as identified below.

(i) Existing Operations (on or before 12/16/93)

Facility Size	Controlled[1] Emissions (lb/yr)	Requirement		
		≤ 60 million amp-hrs[2]	> 60 million amp-hrs[2]	
			Option 1	Option 2[3]
Large	≥ 10 lbs/yr	≤ 0.006 mg/amp-hr	≤ 0.006 mg/amp-hr	≤0.006 mg/amp-hr
Medium	<10 lbs/yr but >2 lbs/yr	≤ 0.03 mg/amp-hr	≤ 0.006 mg/amp-hr	≤0.03 mg/amp-hr and 0.015 mg/dscm
Small	≤ 2 lbs/yr	≤ 0.15 mg/amp-hr	≤ 0.03 mg/amp-hr	≤0.15 mg/amp-hr and 0.015 mg/dscm

(ii) New/Modified Operations (after December 16, 1993)

Facility Size	Controlled[1] Emissions (lb/yr)	Requirement	
		≤ 60 million amp-hrs[2]	> 60 million amp-hrs[2]
Large	≥ 10 lbs/yr	≤ 0.006 mg/amp-hr	≤ 0.006 mg/amp-hr
Medium/Small	< 10 lbs/yr	≤ 0.03 mg/amp-hr	≤ 0.006 mg/amp-hr

1 combined hexavalent or total chrome emissions from hard chrome plating operations

2 maximum cumulative potential rectifier capacity or usage limit

3 "Option 2" is an alternative emission limitation for small and medium facilities that elect to demonstrate compliance with both a mg/amp-hr and mg/dscm requirement.

(iii) Very Small Operations Using Less Than or Equal to 500,000 Ampere-Hours per Year

The Executive Officer may approve, on a case-by-case basis, alternative standards for small hard chrome plating operations using less than or equal to 500,000 ampere-hours per year. The operation shall have been constructed on or before December 16, 1993. At a minimum, the source shall

~~use chemical fume suppressants containing a wetting agent to lower the surface tension of the plating bath to no more than 45 dynes per centimeter (dynes/cm) ($3.1x10^{-3}$ pound-force per foot [lbF/ft]), or the surface tension established during testing of a certified fume suppressant under subdivision (f). The Executive Officer may require additional emission reduction techniques as necessary to reduce the public health impact of emissions from the operation. The owner or operator shall comply with the applicable monitoring [subdivision (g)], recordkeeping [subdivision (j)], and reporting [subdivision (k)] requirements. The owner or operator shall submit a plan to the Executive Officer describing the alternative technique and identifying appropriate monitoring, recordkeeping, and reporting requirements. The Executive Officer, with U.S. EPA concurrence, shall approve this plan if equivalent results are obtained. Upon approval, the requirements identified in the plan shall be the applicable requirements under this regulation.~~

~~(B) Decorative Chrome Electroplating and Chromic Acid Anodizing Facilities~~

~~During tank operation, each owner or operator of an existing, modified, or new source shall control hexavalent chromium emissions discharged to the atmosphere by meeting either of the requirements identified below.~~

~~Method of compliance~~	~~Requirement~~
~~Add-on air pollution control equipment, or chemical fume suppressants forming a foam blanket, or mechanical fume suppressants (i.e. polyballs)~~	~~≤ 0.01 milligrams per dry standard cubic meter of air (mg/dscm) ($4.4x10^{-6}$ gr/dscf)~~
~~Chemical fume suppressants containing a wetting agent~~	~~≤ 45 dynes per centimeter (dynes/cm) ($3.1x10^{-3}$ pound-force per foot [lbF/ft])~~

~~(14) Compliance Plan Submittal~~

~~(A) On or before February 1, 2004, the owner or operator of a facility subject to this rule shall submit a compliance plan, subject to plan~~

~~fees specified in Rule 306. The owner or operator of a facility opting to comply with subparagraph (d)(1)(A), paragraph (d)(2), or submitting permit applications for all equipment subject to this rule to comply with emission limitations in paragraphs (c)(8), (c)(9), or (c)(10) shall not be required to submit a Compliance Plan. The Compliance Plan shall include the following information:~~

~~(i) The emission limitation, alternative standard, or alternative compliance option to be complied with, as specified in subdivision (c) or subdivision (d);~~

~~(ii) The method or methods proposed to comply with the applicable provisions of subdivision (c) or subdivision (d);~~

~~(iii) If applicable, the name of the wetting agent fume suppressant(s), certified pursuant to subdivision (f), to be used and the surface tension(s) at which the fume suppressant is certified.~~

~~(B) The owner or operator shall comply with all conditions of an approved Compliance Plan.~~

~~(C) If a Compliance Plan that proposes compliance with an alternative standard or alternative compliance option is disapproved, the owner or operator shall:~~

~~(i) Comply with the timeline in paragraph (c)(8) or (c)(9), as applicable; and~~

~~(ii) Begin use of a wetting agent chemical fume suppressant, certified pursuant to subdivision (f), within 60 days of the date of notification of Compliance Plan disapproval; and~~

~~(iii) Submit a new Compliance Plan for review within 60 days of notification of Compliance Plan disapproval.~~

(15) Permit Application Submittals

(A) The owner or operator of a hexavalent chromium electroplating or chromic acid anodizing facility subject to this rule, that either does not have a permitted annual ampere-hour limit, or is requesting a reduction of an existing ampere-hour limit, shall submit an application for change of operating condition subject to fees specified in Rule 301. The application shall be submitted to the District no later than February 24, 2009.

(B) The owner or operator of an existing hexavalent chromium electroplating or chromic acid anodizing facility shall submit permit applications for all new or modified equipment necessary to

comply with the requirements of Table 2 of paragraph (c)(11). Permit applications shall be submitted to the District no later than 8 months prior to the applicable effective date of Table 2.

(d) Alternative Compliance Options and Methods

(1) Alternative Interim Compliance Options - Inventory and Health Risk Assessment

~~(1)~~ In lieu of complying with the interim requirements of paragraphs (c)(8), (c)(9), or (c)(10) an owner/operator may elect to submit an inventory and health risk assessment prepared pursuant to Rule 1402 - Control of Toxic Air Contaminants from Existing Sources, subdivisions (n) [Emissions Inventory Requirements] and (j) [Risk Assessment Procedures].

(A) Health risk assessments approved by the Executive Officer prior to May 2, 2003, shall demonstrate that facility-wide emissions of all toxic air compounds result in a cancer risk of:

(i) Less than 25 in a million for facilities located more than 25 meters from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, and located more than 100 meters from an existing, as of May 2, 2003, school (kindergarten through grade 12).

(ii) Less than 10 in a million for facilities located 25 meters or less from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12).

(B) Health risk assessments not approved by the Executive Officer prior to May 2, 2003, shall demonstrate that facility-wide emissions of all toxic compounds with existing controls result in a cancer risk of those specified in (d)(1)(A)(i) or (d)(1)(A)(ii) at their respective receptor distances.~~less than 25 in a million for facilities located more than 25 meters from a sensitive receptor or a residence, or less than 10 in a million for facilities located 25 meters or less from a sensitive receptor or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12)~~

(i) The inventory and health risk assessment shall be submitted by January 1, 2004.

(ii) After review, the Executive Officer will notify the facility in writing whether a health risk assessment conducted pursuant to this paragraph is approved or disapproved.

(iii) If a health risk assessment conducted pursuant to this paragraph is disapproved, or if the approved cancer risk ~~is~~ exceeds those specified in (d)(1)(A)(i) or (d)(1)(A)(ii) at their respective receptor distances, ~~greater than 25 in a million for facilities located more than 25 meters from a sensitive receptor or a residence, or greater than 10 in a million for facilities located 25 meters or less from a sensitive receptor or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12),~~ the facility shall comply with the applicable interim requirements of (c)(8), (c)(9), or (c)(10) no later than one year after notification by the District. Within 60 days from the date of disapproval, the owner or operator shall begin use of a wetting agent chemical fume suppressant certified pursuant to subdivision (f).

(C) The owner or operator of a facility subject to subparagraph (d)(1)(A) or (d)(1)(B) shall comply with enforceable conditions to ensure that controls result in a cancer risk of those specified in (d)(1)(A)(i) or (d)(1)(A)(ii) at their respective receptor distances~~less than 25 in a million for facilities located more than 25 meters from a sensitive receptor or a residence, or less than 10 in a million for facilities located 25 meters or less from a sensitive receptor or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12)~~.

(D) If a health risk assessment, approved under this paragraph as demonstrating a cancer risk of those specified in (d)(1)(A)(i) or (d)(1)(A)(ii) at their respective receptor distances,~~less than 25 in a million for facilities located more than 25 meters from a sensitive receptor or a residence, or less than 10 in a million for facilities located 25 meters or less from a sensitive receptor or a residence, or~~

~~located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12), and it~~ is subsequently determined ~~that the~~to demonstrate actual cancer risks exceedings~~s~~ 25 in a million or 10 in a million, as applicable, the health risk assessment will be disapproved and the owner or operator of the facility shall comply with the specific applicable interim requirements of (c)(8), (c)(9), or (c)(10) no later than one year after notification of disapproval by the District. Within 60 days from the date of notification, the owner or operator shall begin use of a wetting agent chemical fume suppressant certified pursuant to subdivision (f).

(2) Alternative Interim Compliance Options - Emission Reduction Plan

(A) In lieu of complying with the specific interim requirements of paragraph (c)(8), the owner or operator of a facility located 25 meters or less from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12) may elect to submit an Emission Reduction Plan identifying potential emission reduction strategies on or before May 1, 2004. The plan shall demonstrate that facility-wide hexavalent chromium emissions result in a cancer risk of ≤ 10 in a million and shall include, but is not limited to, the following areas:

(i) ~~P~~pollution prevention;

(ii) ~~V~~voluntary, enforceable reduction in ampere-hour limits; ~~o~~and

(iii) ~~I~~installation of add-on control.

(B) Following Executive Officer approval, the owner or operator of a facility that elects to implement an Emissions Reduction Plan shall do the following:

(i) submit all necessary permit applications within 90 days of plan approval; and

(ii) install necessary control equipment within 15 months from the date of plan approval; and

(iii) conduct any performance test required for compliance with a permit condition or a compliance plan condition pursuant to subdivision (e).

(3) Alternative Interim Compliance Options - Maximum Installed Controls

Effective May 1, 2005, in lieu of complying with the interim requirements of subparagraphs (c)(8), (c)(9), or (c)(10) the owner or operator shall use HEPA or an equivalent air pollution control technique and use a wetting agent chemical fume suppressant, certified under subdivision (f), and comply with all applicable permit conditions and approved Compliance Plan conditions.

(4) Alternative Interim Compliance Options - Facility-wide Mass Emission Rate

(A) As an alternative to complying with the interim emission limitation requirements of subparagraph (c)(9), the owner or operator of a facility that is located more than 25 meters from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, and located more than 100 meters from an existing, as of May 2, 2003, school (kindergarten through grade 12) shall provide calculations in the Compliance Plan to demonstrate that facility-wide emissions of hexavalent chromium do not exceed the threshold in Table 3~~2~~ for the appropriate facility operating scenario and regular operating schedule, or the applicable distance-adjusted annual emission level as specified in Appendix 7.

Table 3~~2~~
Annual Emission Thresholds for Facilities Located More than 25 Meters from a ~~Sensitive Receptor~~Licensed Daycare Center, Hospital, Convalescent Home, or a Residence

Operating Scenario	Regular Operating Schedule	Annual Emission Threshold
Vented to Air Pollution Control Device~~Equipment~~	More than 12 hours per day	0.04 lbs/yr
Vented to Air Pollution Control Device~~Equipment~~	12 hours per day or less	0.036 lbs/yr
Not Vented to Air Pollution Control Device~~Equipment~~	Any	0.025 lbs/yr

(B) The owner or operator of a facility complying with this subparagraph shall use the Hexavalent Chromium Source Test Parameter Guidance Document to establish testing parameters.

(C) The owner or operator of a facility complying with this subparagraph shall update the facility-wide emissions calculations

every year using process information from the preceding twelve months, and shall provide such calculations upon request.

(5) Alternative Interim Compliance Options - Alternative Standards for ~~Small~~ Existing Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities with Low Annual Ampere-Hour Usage

(A) Until the emission limits of paragraph (c)(11) become effective, ~~T~~the Executive Officer may approve a Compliance Plan ~~submitted pursuant to paragraph (c)(14)~~ specifying interim alternative standards for ~~small~~ facilities with actual consumption of electrical current less than or equal to 365,000 ampere-hours for any calendar year. For hard chromi~~um~~e electroplating facilities constructed on or before December 16, 1993, the Executive Officer, with U.S. EPA concurrence shall approve this plan if equivalent results are obtained. Upon approval, the requirements identified in the plan shall be the applicable requirements under this regulation.

(B) At a minimum, the hexavalent chromium electroplating or chromic acid anodizing tank shall use chemical fume suppressants containing a wetting agent to lower the surface tension of the electroplating bath to no more than 45 dynes per centimeter (dynes/cm) ($3.1x10^{-3}$ pound-force per foot [lbF/ft]), or the surface tension established during testing of a certified fume suppressant under subdivision (f).

(C) Upon approval of a facility's Compliance Plan, the Executive Officer may require additional emission reduction techniques as necessary to reduce the public health impact of emissions from the operation.

(D) The owner or operator shall comply with the applicable monitoring [subdivision (g)], recordkeeping [subdivision (j)], and reporting [subdivision (k)] requirements.

(E) If the ~~small~~ facility is located 25 meters or less from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12), and actual consumption of electrical current exceeds 500,000 ampere-hours per year after May 2, 2003, the owner or operator shall use HEPA or an equivalent air pollution control technique and use a wetting

agent chemical fume suppressant certified under subdivision (f), on all hexavalent chromium electroplating and chromic acid anodizing tanks. An application for a permit to construct the control equipment shall be filed within 90 days of the date of the approved Notice of Violation for the ampere-hour threshold exceedance and the control equipment shall be installed within 15 months from the date of the approved Notice of Violation for the ampere-hour threshold exceedance.

(F) Emission-Related Exceedance

(i) Effective November 1, 2003, the owner or operator of a facility subject to paragraph (d)(5) located 25 meters or less from a ~~sensitive receptor~~licensed daycare center, hospital, convalescent home, or a residence, or located 100 meters or less from an existing, as of May 2, 2003, school (kindergarten through grade 12) that is using a wetting agent chemical fume suppressant with no associated add-on air pollution control device(s)~~equipment~~ will begin to accrue notices of violation for emission-related exceedances specified under (d)(5)(F)(ii). The owner or operator of a facility who accrues three or more approved notices of violation for an emission-related exceedance within a five year period shall comply with the emission limitation specified in paragraph (c)(8)(A) by installing a ventilation system and HEPA controls, or equivalent controls, on all hexavalent chromium electroplating and chromic acid anodizing tanks.

An application for a permit to construct the control equipment shall be filed within 90 days of the date of the third approved notice of violation and the control equipment shall be installed within 15 months from the date of the third approved notice of violation.

(ii) An emission-related exceedance, for the purpose of this rule, is defined as:

(I) exceeding the applicable surface tension limit established under subdivision (f) or subparagraph (d)(5)(B) for a wetting agent chemical fume

suppressant; or

(II) exceeding the ampere-hour limit specified in subparagraph (d)(5)(A) by 135,000 ampere-hours per year, or less, or exceeding the ampere-hour limit in an approved Compliance Plan condition for any calendar year; or

(III) exceeding the chromic acid weight concentration limit specified in any permit issued after May 2, 2003; or

(IV) a missing stalagmometer, tensiometer, or ampere-hour meter or a broken or inoperable stalagmometer, tensiometer, or ampere-hour meter unless:

(a) it is repaired or replaced within one week after its breakdown; or

(b) the tank or tanks served by the device are removed from service until the device has been repaired or replaced; or

(c) the owner can provide proof of ordering a new device within 7 days after the device became broken or inoperable, and the device is replaced within 14 days after it became broken or inoperable.

(iii) For the purpose of counting notices of violations which may trigger the installation of controls pursuant to this subparagraph, a notice of violation shall be counted as a single emission-related exceedance even if it cites multiple emission-related exceedances as defined in subparagraph (d)(5)(F), provided that the multiple emission-related exceedances are based on a single field inspection conducted in one day.

(iv) The provisions of subparagraph (d)(5)(F) shall apply to an owner or operator of a facility within any five year time period.

(v) The provisions of this paragraph shall in no way limit the evaluation or prosecution by the District of any notices of violation or any emissions-related exceedances contained therein.

(6) Alternative Compliance Methods to paragraph (c)(11) for Existing Hexavalent Decorative and Hard Chromium Electroplating and Chromic Acid Anodizing Facilities

The owner or operator of a facility may submit to the District an alternative compliance method(s) to paragraph (c)(11). In order to operate under this subparagraph, the owner or operator must:

(A) Submit information contained in Appendix 8 to the Executive Officer.

(B) Demonstrate that the alternative method(s) is enforceable, provides an equal, or greater hexavalent chromium emission reduction, and provides an equal, or greater risk reduction than would direct compliance with the requirements of (c)(11).

(C) Implement alternative method(s), upon approval by the Executive Officer, within the applicable compliance dates of Table 2 of (c)(11).

(D) Comply with the requirements set forth in paragraphs (c)(1) through (c)(7) and (c)(15), subparagraphs (c)(11)(B) and (c)(11)(C), subdivisions (e) through (k) and (m), and Appendices 1 through 9.

(e) Performance Test Requirements and Test Methods

(1) Performance Test Requirement

The owner or operator of an existing facility using add-on air pollution control device(s)~~equipment~~, foam blanket chemical fume suppressants, or mechanical fume suppressants to comply with the requirements of paragraphs (c)(8) through (c)(11), ~~(c)(9), (c)(10), or~~ (d)(5), ~~or any source subject to the emission standards in clause (c)(13)(A)(i) or (c)(13)(A)(ii),~~ or any source electing to comply with the mg/dscm emission standard in paragraph (c)(14~~1~~) ~~or subparagraph (c)(13)(B)~~ shall conduct a performance test to demonstrate compliance with the applicable emission standards within 180 days after initial startup or before the applicable effective date listed in Table 2 of paragraph (c)(11), whichever is sooner. New or modified facilities complying with the requirements of paragraphs (c)(12) and (c)(13) shall conduct a performance test within 60 days after initial start-up.

(2) Use of Existing Performance Test

(A) A performance test conducted prior to July 24, 1997 may be used to demonstrate compliance with applicable interim emission standards specified in (c)(8), (c)(9), (c)(10), and (d)(5), or the mg/dscm emission standard in (c)(14) provided the existing source test is approved by the Executive Officer.

(B) A performance test conducted after January 1, 2000 may be used to demonstrate compliance with emission standards of paragraph (c)(11) upon District. The owner or operator of the facility shall submit the subject performance test to the District's Compliance Division by February 24, 2009 for evaluation, and shall meet, at a minimum, the following criteria:

(i) The test demonstrated compliance with the applicable emission limits of paragraph (c)(11); and

(ii) The test is representative of the method to control emissions currently in use as of *(Effective Date)*; and

(iii) The test was conducted using one of the approved test methods specified in paragraph (e)(3).

(3) Approved Test Methods

(A) Emissions testing shall be conducted in accordance with one of the following test methods:

(i) CARB Test Method 425, last amended July 28, 1997, (section 94135, Title 17, California Code of Regulations (CCR)); or

(ii) U.S. EPA Method 306, (40 CFR 63 Appendix A) with a minimum of three test runs; or

(iii) SCAQMD Method 205.1, for results reported as total chromium.

(B) Emissions testing from the cover of electroplating and anodizing tanks shall be conducted in accordance with Smoke Test to Verify the Seal Integrity of Covers Designed to Reduce Chromium Emissions from Electroplating and Anodizing Tanks procedures (See Appendix 5).

(C) Surface tension shall be measured in accordance with U.S. EPA Method 306B (40 CFR 63 Appendix A).

(4) Pre-Test Protocol

(A) Facilities subject to the provisions of paragraph (e)(1), above, that

are either installing new equipment or modifying existing equipment, shall submit a pre-test protocol at least 60 days prior to conducting a performance test. Facilities that are conducting a performance test for existing equipment that require no modification, shall submit a pre-test protocol to the District's Compliance Division no later than 8 months prior to the applicable effective date of Table 2.

(B) The pre-test protocol shall include the performance test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:

(i) target chromium concentration;

(ii) preliminary chromium analytical data; and

(iii) planned sampling parameters.

(C) In addition, the pre-test protocol shall include information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(5) Emission Points Test Requirements

Each emission point subject to the requirements of this rule shall be tested unless a waiver is granted by U.S. EPA and approved by the Executive Officer.

(6) For any interim alternative compliance option in subdivision (d) that requires the results of a performance test to demonstrate facility-wide emissions or cancer risk, or any facility operating under an alternative compliance method pursuant to (d)(6), the owner or operator shall submit a performance test conducted pursuant to subdivision (e).

(7) Capture Efficiency

(A) The owner or operator of a facility using an add-on air pollution control device to comply with the requirements of paragraphs (c)(8) through (c)(13), (d)(5), (d)(6), or any source electing to comply with the mg/dscm emission standard in paragraph (c)(14), shall demonstrate that all emissions are captured by the associated ventilation system by a quantitative measurement approved by the District. An example of an approved quantitative measurement is demonstrating that the capture system meets the design criteria and ventilation velocities specified in the American Conference of Governmental Hygienists Industrial Ventilation, A Manual of

Recommended Practice.

(B) The owner or operator of a facility subject to (e)(7)(A) shall periodically conduct a smoke test in order to demonstrate continuous compliance with the capture efficiency of the ventilation system. The test shall be conducted using the method described in Appendix 9, or any other method deemed acceptable by the Executive Officer. The test shall be:

(i) Conducted using the method described in Appendix 9;

(ii) Conducted initially upon start-up for new and modified facilities, and within 60 days of the effective date of this rule for existing facilities; and

(iii) Conducted periodically by the facility at least once every six months of a previously conducted test.

(C) The owner or operator of a ventilation system that demonstrates non-compliance with any smoke test shall immediately shutdown, upon discovery, all electroplating or anodizing lines associated with such ventilation systems until a smoke test demonstrating full compliance with paragraph (e)(7)(B) is achieved.

(f) Certification of Wetting Agent Chemical Fume Suppressants

Any wetting agent chemical fume suppressant used to comply with the requirements of this rule shall be certified by the Executive Officer as able to reduce or suppress hexavalent chromium emissions at the surface of an electroplating or anodizing bath through the reduction of surface tension of the bath to a level at which an emission factor ~~of~~ below 0.01 milligrams per ampere hour is achieved. Wetting agent chemical fume suppressants shall meet, at a minimum, a surface tension ~~of~~ below 45 dynes/cm ~~or less~~, as measured by a stalagmometer, or below 35 dynes/cm, as measured by a tensiometer, unless an alternative is approved pursuant to subdivision (m). The Executive Officer will publish and periodically update a list of certified chemical fume suppressants.

(g) Parameter Monitoring

(1) Add-On Air Pollution Control Device~~Equipment~~

(A) Pressure Drop

The owner or operator shall continuously monitor the pressure drop across an add-on air pollution control device such as a composite

mesh-pad (CMP), packed-bed scrubber (PBS), a CMP/PBS, fiber-bed mist eliminator, and a High Efficiency Particulate Arrestors (HEPA) filter with a mechanical gauge. The gauge shall be located so that it can be easily visible and in clear sight of the operation or maintenance personnel. The pressure drop shall be maintained within ± 1 inch of water of the value established during the performance test to demonstrate compliance with the emission limitation for CMP, PBS, a CMP/PBS, and a fiber-bed mist eliminator. The pressure drop shall be maintained within −1/2 times to +2 times the inches of water of the value established during the performance test to demonstrate compliance with the emission limitation for HEPA filters.

(B) Inlet Velocity Pressure

The owner or operator shall continuously monitor the inlet velocity pressure of an add-on air pollution control device such as a composite mesh-pad (CMP), packed-bed scrubber (PBS), a CMP/PBS, a fiber-bed mist eliminator, and a High Efficiency Particulate Arrestors (HEPA) filter with a mechanical gauge. The gauge shall be located so that it can be easily visible and in clear sight of the operation or maintenance personnel. The inlet velocity pressure shall be maintained within ± 10 percent of the value established during the performance test to demonstrate compliance with the emission limitation.

(2) Wetting Agent Chemical Fume Suppressants (Excluding Decorative Chromium Electroplating Tanks Using a Trivalent Chromium Bath)

(A) The owner or operator shall monitor the surface tension of the chromiume electroplating or chromic acid anodizing tank that contains a wetting agent chemical fume suppressant with either a stalagmometer or tensiometer using U.S. EPA Method 306B. The surface tension shall be maintained at or below the value established under subdivision (f) or specified in permit conditions or approved Compliance Plan conditions for permits or Compliance Plan approvals issued after May 2, 2003. Surface tension shall be measured daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If a violation occurs, the measurement frequency shall return to daily

for 20 operating days, and weekly thereafter.

(B) The owner or operator of a facility operating under an approved alternative compliance method pursuant to paragraph (d)(6), and using chemical fume suppressants as all or partial control of hexavalent chromium emissions must measure and monitor the surface tension of the electroplating or anodizing bath daily. The surface tension must be maintained at or below the surface tension measured during the performance test.

(3) Fume Suppressants Forming a Foam Blanket

The owner or operator shall monitor the foam blanket thickness across the surface of the chromiume electroplating or chromic acid anodizing tank. The foam blanket thickness shall be maintained consistent with the requirements established during the performance test to demonstrate compliance with the emission limitation. Foam thickness shall be measured hourly for 15 operating days, and daily thereafter as long as there is no violation of the foam thickness requirement. If a violation occurs, the measurement frequency shall return to hourly for 15 operating days, and daily thereafter.

(4) Polyballs or Similar Mechanical Fume Suppressants

The owner or operator shall visually inspect the chromiume electroplating or chromic acid anodizing tank for coverage comparable to the coverage during the performance test daily.

(h) Inspection and Maintenance Requirements

(1) Hard and decorative chromiume electroplating, and chromic acid anodizing operations using an add-on air pollution control deviceequipment shall comply with the applicable inspection and maintenance requirements listed in Table 43. The owner/operator of an add-on air pollution control device custom designed for a specific operation shall develop operating and maintenance requirements. The requirements shall be submitted to the District for review and approval. The requirements and frequency of inspection must be sufficient to ensure compliance.

Table 43

Summary of Inspection and Maintenance Requirements for Sources Using Add-on Air Pollution Control Device(s)~~Equipment~~

Control Technique/Equipment	Inspection and Maintenance Requirements	Frequency
Composite mesh-pad (CMP) system.	1. Visually inspect device to ensure that there is proper drainage, no unusual chromic acid buildup on the pads, and no evidence of chemical attack that affects the structural integrity of the device.	1. Once per quarter.
	2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.	2. Once per quarter.
	3. Visually inspect ductwork from tank to the control device to ensure there are no leaks.	3. Once per quarter.
	4. Perform washdown of the composite mesh-pads in accordance with manufacturer's recommendations.	4. Per manufacturer.
Packed-bed scrubber (PBS)	1. Visually inspect device to ensure there is proper drainage, no unusual chromic acid buildup on the packed-beds, and no evidence of chemical attack that affects the structural integrity of the device.	1. Once per quarter.
	2. Visually inspect back portion of the chevron blade mist eliminator to ensure that it is dry and there is no breakthrough of chromic acid mist.	2. Once per quarter.
	3. Same as number 3 above for CMP system.	3. Once per quarter.
	4. Add fresh makeup water to the packed-bed[A].	4. Whenever makeup is added.
PBS/CMP system	1. Same as for CMP system.	1. Once per quarter.
	2. Same as for CMP system.	2. Once per quarter.

[A] Horizontal packed-bed scrubbers without continuous recirculation must add make-up water to the top of the packed-bed.

Table 4~~3~~

Summary of Inspection and Maintenance Requirements for Sources Using Add-on Air Pollution Control Device(s)~~Equipment~~ (cont)

Control Technique/Equipment	Inspection and Maintenance Requirements	Frequency
	3. Same as for CMP system.	3. Once per quarter.
	4. Same as for CMP system	4. Per manufacturer.
Fiber-bed mist eliminator[B]	1. Visually inspect fiber-bed unit and prefiltering device to ensure there is proper drainage, no unusual chromic acid buildup in the units, and no evidence of chemical attack that affects the structural integrity of the devices.	1. Once per quarter.
	2. Visually inspect ductwork from tank or tanks to the control device to ensure there are no leaks.	2. Once per quarter.
	3. Perform washdown of fiber elements in accordance with manufacturer's recommendations.	3. Per manufacturer.
High Efficiency Particulate Arrestors filter (HEPA)	1. Look for changes in the pressure drop.	1. Once per week.
	2. Replace HEPA filter.	2. Per manufacturer's specifications or District's requirement.
Chromiu~~m~~e Tank Covers	1. Drain the air-inlet (purge air) valves at the end of each day that the tank is in operation.	1. Once per day.
	2. Visually inspect access door seals and membranes for integrity.	2. Once per week.
	3. Drain the evacuation unit directly into the electroplating tank or into the rinse tanks (for recycle into the electroplating tank).	3. Once per week.

[B] Inspection and maintenance requirements for the control device installed upstream of the fiber-bed mist eliminator to prevent plugging do not apply as long as the inspection and maintenance requirements for the fiber-bed unit are followed.

Table 43

Summary of Inspection and Maintenance Requirements for Sources Using Add-on Air Pollution Control Device(s)~~Equipment~~ (cont)

Control Technique/Equipment	Inspection and Maintenance Requirements	Frequency
	4. Visually inspect membranes for perforations using a light source that adequately illuminates the membrane (e.g., Grainger model No. 6X971 Fluorescent Hand Lamp).	4. Once per month.
	5. Visually inspect all clamps for proper operation; replace as needed.	5. Once per month.
	6. Clean or replace filters on evacuation unit.	6. Once per month.
	7. Visually inspect piping to, piping from, and body of evacuation unit to ensure there are no leaks and no evidence of chemical attack.	7. Once per quarter.
	8. Replace access door seals, membrane evacuation unit filter, and purge air inlet check valves in accordance with the manufacturer's recommendations.	8. Per manufacturer.
Pitot tube	Backflush with water, or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained. Check Pitot tube ends for damage. Replace Pitot tube if cracked or fatigued.	Once per quarter.
Ampere-hour meter	Install and maintain per manufacturer's specifications.	Per manufacturer.

(2) Hard and decorative chromiume electroplating, and chromic acid anodizing operations using chemical fume suppressants (i.e. wetting agent, foam) or mechanical fume suppressants (i.e., polyballs) shall comply with the applicable inspection and maintenance requirements in Table 54.

Table 54
Summary of Inspection and Maintenance Requirements for Sources Using Chemical or Mechanical Fume Suppressants

Equipment	Inspection and Maintenance Requirement for Monitoring Equipment	Frequency
Ampere-hour meter	Install and maintain per manufacturer's specifications.	Per manufacturer.
Stalagmometer/ Tensiometer	Calibrate and maintain per manufacturer's specifications.	Per manufacturer.

(i) Operation and Maintenance Plan Requirements

(1) Operation and Maintenance Plan

The owner or operator subject to the inspection and maintenance requirements of paragraph (h)(1) shall prepare an operation and maintenance plan. For major sources, the plan shall be incorporated by reference into the source's Title V permit. The plan shall incorporate the inspection and maintenance requirements for that device or monitoring equipment, as identified in Tables 4 and 5~~1~~, and shall include the following elements:

(A) A standardized checklist to document the operation and maintenance of the source, the add-on air pollution control device, and the process and control system monitoring equipment; and

(B) Procedures to be followed to ensure that equipment is properly maintained.

The owner or operator may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements of this subdivision.

(2) Operation and Maintenance Plan Availability

The owner or operator shall keep the written operation and maintenance plan on record after it is developed, to be made available for inspection, upon request.

(3) Operation and Maintenance Plan Modifications

Any changes made by the owner or operator should be documented in an

addendum to the plan. In addition, the owner or operator shall keep previous (i.e., superseded) versions of the operation and maintenance plan on record to be made available for inspection, upon request, for a period of 5 years after each revision to the plan.

(4) Breakdown Provisions In Operation and Maintenance Plan

The operation and maintenance plan shall be revised as necessary to minimize breakdowns.

(j) Recordkeeping

(1) Inspection records for sources using add-on control air pollution control devices:

The owner or operator shall maintain inspection records to document that the inspection and maintenance requirements of subdivision (h) and Table 43, and that the provisions of the operation and maintenance plan required by subdivision (i) have been met. The record can take the form of a checklist and should identify:

(A) the device inspected;

(B) the date and time of inspection;

(C) a brief description of the working condition of the device during the inspection;

(D) maintenance activities performed on the components of the air pollution control system (i.e. duct work replacement, filter pad replacement, fan replacement, etc.); and

(E) any actions taken to correct deficiencies found during the inspection.

(2) Inspection Records for Sources Using Chemical Fume Suppressants (i.e. wetting agent, foam) or Mechanical Fume Suppressants (i.e., polyballs).

The owner or operator shall maintain inspection records to document that the inspection and maintenance requirement of paragraph (h)(2) and Table 54 have been met. The record can take the form of a checklist.

(3) Performance Test and Smoke Test Records

The owner or operator shall maintain test reports and records documenting the conditions and results of all performance tests and smoke tests required by subdivision (e). The records shall include performance test results required to determine compliance with paragraph (g)(1), including the pressure drop established during the performance test to demonstrate

compliance with the emission limitation for composite mesh pad (CMP), packed bed scrubber (PBS), and CMP/PBS, and a fiber-bed mist eliminator and the inlet velocity pressure established during the performance test to demonstrate compliance with the emission limitation.

(4) Monitoring Data Records

The owner or operator shall maintain records of monitoring data required by paragraph (c)(~~2~~1) and subdivision (g) that are used to demonstrate compliance with the requirements of subdivision (c) and subdivision (d), if applicable, including the date and time the data are collected.

(A) Cumulative Rectifier Usage Records

Record the actual cumulative rectifier usage expended during each month of the reporting period, and the total usage expended to date.

(B) Pressure Drop

The owner or operator shall record the pressure drop daily~~once a week~~.

(C) Inlet Velocity Pressure

The owner or operator shall record the inlet velocity pressure daily~~weekly~~.

(D) Surface Tension

(i) The owner or operator shall record the surface tension daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If the surface tension exceeds the level established under subdivision (f), the owner or operator shall again record the surface tension daily for 20 operating days, and weekly thereafter.

(ii) For facilities operating under an approved alternative compliance method pursuant to paragraph (d)(6), and using chemical fume suppressants as all or partial control of hexavalent chromium emissions, the owner or operator shall record the surface tension of the electroplating or anodizing bath daily.

(E) Foam Thickness

The owner or operator shall record the foam thickness hourly for 15 operating days, and daily thereafter as long as there is no violation of the foam thickness requirement. If a violation occurs, the

measurement frequency shall return to hourly for 15 operating days, and daily thereafter.

(5) Breakdown Records

The owner or operator shall maintain records of the occurrence, duration, and cause (if known) and action taken on each breakdown.

(6) Records of Excesses

The owner or operator shall maintain records of exceedances of: the emission limitations in subdivision (c) and (d), the monitoring parameter values established under subdivision (g), or any site-specific operating parameters established for alternative equipment. The records shall include the date of the occurrence, the duration, cause (if known), and, where possible, the magnitude of any excess emissions.

~~(7) Records Demonstrating Facility Size~~

~~An owner or operator may demonstrate the size of a hard chromium electroplating facility through the definitions in subdivision (b). Alternatively, an owner or operator of a facility with a maximum cumulative potential rectifier capacity of 60 million amp-hr/yr or more may be considered small or medium if the actual cumulative rectifier usage is less than 60 million amp-hr/yr as demonstrated using either of the following procedures:~~

~~(A) Annual Actual Cumulative Rectifier Capacity~~

~~Show by records that the facility's previous annual actual cumulative rectifier capacity was less than 60 million amp-hr/yr, by using nonresettable ampere-hour meters and keeping monthly records of actual ampere-hour capacity for each 12-month rolling period following the compliance date. The actual cumulative rectifier capacity for the previous 12-month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months; or~~

~~(B) Maximum Cumulative Potential Rectifier Usage Limit~~

~~By accepting a limit on the maximum cumulative potential rectifier usage of a hard chromium electroplating facility through a Title V permit condition or a District operating permit condition and by maintaining monthly records in accordance with subparagraph (j)(4)(A) to demonstrate that the limit has not been exceeded.~~

(~~8~~7) The owner or operator shall maintain records demonstrating compliance

with housekeeping practices, as required by paragraph (c)(~~5~~4), including the dates on which specific activities were completed, and records showing that chromium or chromium-containing wastes have been stored, disposed of, recovered, or recycled using practices that do not lead to fugitive dust and in accordance with hazardous waste requirements.

(~~9~~8) Records of Fume Suppressant Additions

For sources using fume suppressants to comply with the standards, the owner or operator shall maintain records of the date, time, approximate volume, and product identification of the fume suppressants that are added to the electroplating or anodizing bath.

(~~10~~9 Records of Trivalent Bath Components

)

For sources complying with paragraph (c)(1~~4~~1) using trivalent chromiume baths, the owner or operator shall maintain records of the bath components purchased, with the wetting agent clearly identified as a bath constituent contained in one of the components.

(10) Records of Filter Purchase and Disposal

For sources using add-on air pollution control devices to comply with the standards, the owner or operator shall retain purchase orders for filters and waste manifest records for filter disposal.

(11) New/Modified Source Review Information

The owner or operator shall maintain records supporting the notifications and reports required by the District's new source review provisions and/or subdivision (l).

(12) Records Retention

All records shall be maintained for five years, at least two years on site.

(k) Reporting

(1) Performance Test Documentation

(A) Notification of Performance Test

(i) The owner or operator of a source shall notify the Executive Officer that a performance test shall be conducted at least 60 calendar days before the performance test is scheduled.

(ii) The provisions in clause (k)(1)(A)(i), above, do not apply if the performance test was conducted prior to July 24, 1997 and was approved by the Executive Officer and the U.S.

EPA.

(B) Reports of Performance Test Results

The owner or operator shall report performance test results to the Executive Officer. Reports of performance test results shall be submitted no later than 90 calendar days following the completion of the required performance test, and shall be submitted as part of the notification of compliance status required by paragraph (k)(2).

(C) The content of performance test reports shall contain, at a minimum, the information identified in Appendix 1.

(2) Initial Compliance Status Report

An initial compliance status report is required each time that a source becomes subject to the requirements of this rule. The owner or operator shall submit to the Executive Officer an initial compliance status report, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with this rule.

(A) Initial Compliance Status Report Due Date

The initial compliance status report for existing facilities shall be submitted to the Executive Officer no later than ~~30 calendar days after the effective date of this rule~~April 24, 2008.~~ for existing sources, or at start-up for new sources~~. New or modified facilities shall submit the initial compliance status report upon start-up.

(B) The ~~content of the~~ initial compliance status report shall contain, at a minimum, the information identified in Appendix 2.

(3) Ongoing Compliance Status and Emission Reports

The owner or operator shall submit a summary report to the Executive Officer to document the ongoing compliance status.

(A) Frequency of Ongoing Compliance Status and Emission Reports

The report shall be submitted on or before February 1 for all sources and shall include information covering the preceding calendar year (January 1 through December 31).

(B) The content of ongoing compliance status and emission reports shall, at a minimum, contain the information identified in Appendix 3.

(4) Reports of Breakdowns

The owner or operator shall report breakdowns as required by District Rule 430.

(5) Reports Associated with Trivalent Chromium Baths Using a Wetting Agent

Owners or operators with trivalent chromium baths using a wetting agent are not subject to paragraphs (1) through (3) of this subdivision, but shall instead submit the following reports:

(A) Sources Currently Using Trivalent Chromiume

No later than November 24, 2007~~30 calendar days after the effective date of this rule~~, the owner or operator of an existing facility shall submit a notification of compliance status that contains the information specified in (k)(5)(A)(i) through (iii). New and modified facilities shall submit this information within 30 days after the effective date of this rule.~~:~~

(i) The name and address of each source subject to this paragraph;

(ii) A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply; and

(iii) The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified.

(B) Sources Changing to Trivalent Chromiume

Within 30 days of a change to the trivalent chromium electroplating process, a report that includes:

(i) A description of the manner in which the process has been changed and the emission limitation, if any, now applicable to the source; and

(ii) The notification and reporting requirements of paragraphs (1), (2), and (3) of this subdivision, if the source complies with the emission limitation option, or paragraph (5) of this subdivision, if the source uses a wetting agent to comply. The report shall be submitted in accordance with the schedules identified in those paragraphs

(6) Adjustments to the Timeline for Submittal and Format of Reports

The Executive Officer may adjust the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of~~r~~ reports, or accept reports prepared to comply with other state or local requirements. Adjustments

shall provide the same information and shall not alter the overall frequency of reporting.

(l) New and Modified Sources

(1) Notification of Construction

After the effective date of this rule no person may construct or modify a source, such that it becomes a source subject to this section, without submitting a notification of construction or modification to the Executive Officer and receiving approval in advance to construct or modify the source. The contents of the Notification of Construction shall include information as listed in Appendix 4.

(2) New Source Review Rules

In lieu of complying with the requirements in paragraph (l)(1) of this subdivision, a facility may fulfill these requirements by complying with the District's new source review rule or policy, provided similar information is obtained.

(m) Procedure for Establishing Alternative Requirements

(1) Request Approval of an Alternative Requirement

Any person may request approval of an alternative requirement. The person seeking such approval shall submit the proposed alternative requirement to the Executive Officer for approval. The request shall include the proposed alternative requirement, the reason for requesting the alternative requirement, and information demonstrating that the criteria for approval identified in Appendix 6 is met.

(2) Approval of an Alternative Requirement

The Executive Officer may approve an alternative requirement if it determines that application of the alternative requirement meets the criteria for approval identified in Appendix 6 and the Executive Officer has submitted the proposed alternative requirements and has received concurrence from the applicable concurring agencies identified in Appendix 6.

(3) Approval Criteria

Nothing in this subdivision prohibits the Executive Officer from establishing approval criteria more stringent that required in Appendix 6.

(4) Alternatives Already Approved by U.S. EPA

Waivers for alternatives already approved by the U.S. EPA prior to October 9, 1998 shall remain in effect unless rescinded by U.S. EPA.

(n) Exemptions

(1) This rule shall not apply to process tanks associated with a chromium electroplating or chromic acid anodizing process~~, but~~ in which neither chromium electroplating nor chromic acid anodizing is taking place. Examples of such tanks include, but are not limited to, rinse tanks, etching tanks, and cleaning tanks. Tanks that contain a chromium solution~~, but~~ in which no electrolytic process occurs, are not subject to this rule. An example of such a tank is a chromiume conversion coating tank where no electrical current is applied.

(2) The requirements of subdivisions (g), (h), and (i) do not apply to decorative chromiume electroplating tanks using a trivalent chromium bath with a wetting agent.

(3) The requirements of paragraphs (c)(8)~~, (c)(9), (c)(10), (c)(11),~~ through (c)(1~~4~~3), (d)(5) and (d)(6~~5~~), and subdivision (i) do not apply during periods of equipment breakdown, provided the provisions of ~~the~~ District~~'s~~ Rule 430 are met, notwithstanding subparagraph (b)(3)(B) of Rule 430.

(o) Title V Permit Requirements

The owner or operator of a major source facility subject to the requirements of this section is required to obtain a Title V permit from the District in accordance with the procedures set forth in District Regulation XXX.

(p) Rule 1402 Inventory Requirements

The owner or operator of chromium electroplating or chromic acid anodizing tanks at a facility that is in compliance with this rule will not be required to submit an emission inventory to the Executive Officer for emissions of toxic compounds subject to this rule, pursuant to subparagraph (n)(1)(B) of Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.

(q) Chromium Electroplating or Chromic Acid Anodizing Kits Requirements

(1) Except as provided in (q)(2), no person shall sell, supply, offer for sale, or manufacture for sale in the District, any chromium electroplating or chromic acid anodizing kit.

(2) The provisions of (q)(1) do not apply to any person that sells, supplies,

offers for sale, or manufactures for sale in the District a chromium electroplating or chromic acid anodizing kit to the owner or operator of a permitted facility at which chromium electroplating or chromic acid anodizing is performed.

(3) No person shall use a chromium electroplating or chromic acid anodizing kit to perform chromium electroplating or chromic acid anodizing unless these activities are performed at a permitted facility that complies with the requirements of this rule.

(4) For the purposes of this section, "chromium electroplating or chromic acid anodizing kit" means chemicals and associated equipment for conducting chromium electroplating or chromic acid anodizing including, but not limited to, internal and external tank components.

Appendix 1 - Content of Performance Test Reports.

Performance test reports shall contain, at a minimum, the following information:

1. A brief process description;
2. Sampling location description(s);
3. A description of sampling and analytical procedures and any modifications to standard procedures;
4. Test results in milligrams/ampere-hour;
5. Quality assurance procedures and results;
6. Records of operating conditions during the test, preparation of standards, and calibration procedures;
7. Original data for field sampling and field and laboratory analyses;
8. Documentation of calculations; and
9. Any other information required by the test method.

Note: Test reports consistent with the provisions of ARB Method 425 will fulfill the above performance test report content requirement.

Appendix 2 - Content of Initial Compliance Status Reports.

Initial compliance status reports shall contain, at a minimum, the following information:

1. Facility name, AQMD ID number, facility address, owner/operator name, and telephone number;
2. The distance ~~from the center~~ of the facility to the property line of the nearest commercial/industrial building~~, residence,~~ and sensitive receptor using measurement methods provided in subparagraph (c)(11)(B);
3. Sensitive receptor locations, if they are located within one-quarter of a mile from the center of the facility;
4. Building parameters
   - Stack height in feet (point sources); or
   - Building area in square feet (volume sources).
5. Maximum potential rectifier capacity per tank and facility maximum operating schedule (more than or less than or equal to 12 hours per day);
6. The applicable emission limitation and the methods that were used to determine compliance with this limitation;
7. Facility-wide emissions established under paragraph (d)(4), if applicable;
8. If a performance test is required, the test report documenting the results of the performance test, which contains the elements listed in Appendix 1;
9. If an initial smoke test demonstrating the capture efficiency of a ventilation system is required, the test report documenting the results which contain the elements listed in Appendix 9;
10~~9~~. The type and quantity, in pounds, of hazardous air pollutants emitted by the source. (If the owner or operator is subject to the construction and modification provisions of subdivision (l) and had previously submitted emission estimates, the owner or operator shall state that this report corrects or verifies the previous estimate.);
11~~0~~. For each monitored parameter for which a compliant value is to be established under subdivision (g), the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;
12~~1~~. The methods that will be used to determine continuous compliance, including a description of monitoring and reporting requirements, if methods differ from those identified in this section;
13~~2~~. A description of the air pollution control technique for each emission point;
14~~3~~. A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by subdivision (i);

~~14. If the owner or operator is determining facility size based on actual cumulative rectifier usage, records to support that the facility is small or medium. For existing sources, records from any 12-month period preceding the compliance date shall be used or a description of how operations will change to meet a small or medium designation shall be provided. For new sources, records of projected rectifier usage for the first 12-month period of tank operation shall be used;~~

15. The actual cumulative ampere-hour usage expended during the preceding calendar year, if operation occurred;

16. A statement that the owner or operator, or personnel designated by the owner or operator, has completed a District-approved training program pursuant to paragraph (c)(7); and

1~~5~~7. A statement by the owner or operator as to whether the source has complied with the provisions of this section.

Appendix 3 - Content of Ongoing Compliance Status and Emission Reports.

Ongoing compliance status and emission reports shall, at a minimum, contain the following information:

1. The company name and address of the source;
2. An identification of the operating parameter that is monitored for compliance determination, as required by subdivision (g);
3. The relevant emission limitation for the source, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the notification of initial compliance status required by Appendix 2;
4. The beginning and ending dates of the reporting period;
5. A description of the type of process performed in the source;
6. The actual cumulative rectifier usage expended during the reporting period, on a month-by-month basis, if the source is a hard or decorative chromium electroplating tank or chromic acid anodizing tank;
7. Updated facility-wide emissions established under subparagraph (d)(4), if applicable;
8. Hexavalent chromium and trivalent chromium ~~throughput~~emissions data in ~~pounds~~grams per year for the reporting period;
9. ~~Residences and s~~Sensitive receptor ~~locations~~distances, if they are located within ¼ of mile from the center of the facility and facility maximum operating schedule (more than or less than or equal to 12 hours per day), if changed since submittal of the initial compliance status report or subsequent ongoing compliance status and emission reports. Sensitive receptor distances shall be measured using methods provided in (c)(11)(B);
10. A summary of any excess emissions or exceeded monitoring parameters as identified in the records required by paragraph (j)(6);
11. A certification by a responsible official that the inspection and maintenance requirements in subdivision (h) were followed in accordance with the operation and maintenance plan for the source;
12. If the operation and maintenance plan required by subdivision (i) was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emissions and/or monitoring parameter excesses are believed to have occurred, and a copy of the record(s) required by paragraph (j)(1) documenting that the operation and maintenance plan was not followed;
13. If applicable, results of periodic smoke tests demonstrating capture efficiency of ventilation system(s) conducted during the reporting period;

14~~3~~. A description of any changes in monitoring, processes, or controls since the last reporting period;

15. A statement that the owner or operator, or personnel designated by the owner or operator has, within the last 2 years, completed a District-approved training program pursuant to paragraph (c)(7);

14~~6~~. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

15~~7~~. The date of the report.

Appendix 4 - Notification of Construction Reports.

Notification of Construction reports shall contain the following information:

(A) The owner or operator's name, title, and address;

(B) The address (i.e., physical location) or proposed address of the source if different from the owner's or operator's;

(C) A notification of intention to construct a new source or make any physical or operational changes to a source that may meet or has been determined to meet the criteria for a modification;

(D) The expected commencement and completion dates of the construction or modification;

(E) The anticipated date of (initial) startup of the source;

(F) The type of process operation to be performed (hard or decorative chromium electroplating, or chromic acid anodizing);

(G) A description of the air pollution control technique to be used to control emissions, such as preliminary design drawings and design capacity if an add-on air pollution control device is used; and

(H) An estimate of emissions from the source based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emission limits of this subpart. Calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations.

Note: A facility can fulfill these report content requirements by complying with the District's new source review rule or policy, provided similar information is obtained.

Appendix 5 - Smoke Test for Chromiume Tank Covers.

SMOKE TEST TO VERIFY THE SEAL INTEGRITY OF COVERS DESIGNED TO REDUCE CHROMIUM EMISSIONS FROM ELECTROPLATING AND ANODIZING TANKS

1. Applicability and Principle

1.1 Applicability. This alternative method is applicable to all hard chromium electroplating and anodizing operations where a chromiume tank cover is used on the tank for reducing chromium emissions.

1.2 Principle. During chromium electroplating or anodizing operations, bubbles of hydrogen and oxygen gas generated during the process rise to the surface of the tank liquid and burst. Upon bursting, tiny droplets of chromic acid (chromium mist) become entrained in the air above the tank. Because the chromiume tank cover completely encloses the air above the tank, the chromium mist either falls back into the solution because of gravity or collects on the inside walls of the chromiume tank cover and runs back into the solution. A semi-permeable membrane allows passage of the hydrogen and oxygen out of the chromiume tank cover. A lit smoke device is placed inside the chromiume tank cover to detect leaks at the membrane, joints, or seals.

2. Apparatus

2.1 Smoke device. Adequate to generate 500 to 1000 ft^3 of smoke/20 ft^2 of tank surface area (e.g., Model #1A=15 SECONDS from Superior Signal, New York).

2.2 Small container. To hold the smoke device.

3. Procedure

Place the small container on a stable and flat area at center of the chromiume tank cover (you can use a board and place it on the buss bars). Place the smoke device inside the container. After lighting the smoke device, quickly close the access door to avoid smoke from escaping. Let smoke device completely burn; entire space under the chromiume tank cover will now be filled with the smoke. Observe for leaks of smoke from each seal, joint, and membrane of the chromiume tank cover. Record these observations including the locations and a qualitative assessment of any leaks of smoke.

When all seals, joints, and membranes have been observed, evacuate the unit to remove the smoke from the chromiume tank cover.

Appendix 6 – Approval of Alternatives for Specific Requirements

Section	Requirement	Description of Authority	Approving Agency	Concurring Agency[1]
(a)	Applicability	Assisting an owner or operator in determining whether a facility is subject to the ATCM	District	
(c)	Standards	Approving alternative standards	District	U.S. EPA
(e)(1)	Performance Test Requirement	Waiving a performance test requirement	District	
(e)(2)	Use of Existing Performance Tests	Approving the use of existing performance test results to demonstrate compliance, based on the "Description of the Technical Review Protocol for Performance Tests of California Chrome Plating Sources" (see Attachment 2 of the July 10, 1998 memorandum from John S. Seitz entitled, "Delegation of 40 CFR Part 63 General Provisions Authorities to State and Local Air Pollution Control Agencies.")	District	
(e)(3)	Test Method	Approving site-specific alternatives to test methods	District for minor[1] or intemediate[2] changes	U.S. EPA/ARB for major[3] changes
(e)(4)	Pre-Test Protocol	Approving pre-test protocols	District	
(e)(5)	Test All Emission Points	Waiving the requirement to test all emission points	District	
(g)	Parameter Monitoring	Approving site-specific changes in monitoring methodology	District for minor[1] or intermediate[4] changes	U.S. EPA for major changes[3]
(h)	Inspection and Maintenance Requirements	Approving site-specific changes to inspection and maintenance requirements	District	
(i)	Operation and Maintenance Plans	Approving or requiring site-specific changes to operation and maintenance plans	District	
(j)(1)-(11~~0~~)	Recordkeeping	Waiving or altering recordkeeping requirements	District	U.S. EPA
(j)(12~~1~~)	Retention of	Waiving or altering the requirement to retain records	District	U.S. EPA

Section	Requirement	Description of Authority	Approving Agency	Concurring Agency[1]
	Records	for 5 years		
(k)	Reporting	Waiving or altering reporting requirements	District	U.S. EPA[5]

1 Minor change to a test method or monitoring is a modification to a federally enforceable test method or monitoring that (a) does not decrease the stringency of the emission limitation or standard or the compliance and enforcement measures for the relevant standard; (b) has no national significance (e.g., does not affect implementation of the application regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the test method or monitoring requirement); and (c) is site specific, made to reflect or accommodate the operation characteristics, physical constraints, or safety concerns of an affected source.

2 Intermediate change to a test method is a within-method modification to a federally enforceable test method involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Intermediate changes are not approvable if they decrease the stringency of the standard.

3 Major change to a test method or monitoring is a modification to a federally enforceable test method or federally required monitoring that uses unproven technology or procedures or is an entirely new method (sometimes necessary when the required test method is unsuitable).

4 Intermediate change to monitoring is a modification to federally required monitoring involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the compliance and enforcement measures for the relevant standard.

5 U.S. EPA concurrence is not needed for adjustments made according to subdivision (k)(6).

Appendix 7 – Distance-Adjusted Ampere-Hour and Annual Emissions Limits For Facilities Located More Than 25 Meters from a Residence or Sensitive Receptor.

Facilities subject to the interim requirements of paragraph (c)(9) or complying with the interim facility-wide mass emission rate in paragraph (d)(4) may adjust the ampere-hour or annual emission limits according to actual receptor distance. Ampere-hour limits refer to actual consumption of electrical current from all hexavalent chromium electroplating and chromic acid anodizing operations at a facility.

Use the following tables to determine the appropriate ampere-hours or annual emissions for compliance with the interim emission limitations in paragraph (c)(9), or compliance with the interim facility-wide mass emission rate in paragraph (d)(4) according to the distance to the nearest receptor. Receptor distance is measured as follows:

Table 7-1
Measuring Receptor Distance

Source Type	Measure From:	Measure To:
Point Source, Single Stack	Stack	Property Line of Nearest Receptor
Point Source, Multiple Stacks	Centroid of Stacks	Property Line of Nearest Receptor
Volume Source No Stack	Center of Building	Property Line of Nearest Receptor

Table 7-2
Hexavalent Chromium Electroplating and Chromic Acid Anodizing Operation Vented to Air Pollution Control Device(s)~~Equipment~~ Normally Operating 12 Hours Per Day or Less

Distance to Nearest Receptor (m)	25	30	35	40	45	50	55	60
Ampere-Hours/yr (x10^6)	1.60	1.74	1.88	2.03	2.22	2.44	2.69	2.98
Annual Emissions (lbs/yr)	0.036	0.039	0.042	0.045	0.049	0.054	0.060	0.066
Distance to Nearest Receptor (m)	65	70	75	80	85	90	95	100
Ampere-Hours/yr (x10^6)	3.36	3.84	4.48	4.87	5.33	5.88	6.56	7.42
Annual Emissions (lbs/yr)	0.074	0.085	0.099	0.108	0.118	0.130	0.145	0.164

Table 7-3
Any Hexavalent Chromium Electroplating and Chromic Acid Anodizing Operation Vented to Air Pollution Control Device(s)~~Equipment~~ Normally Operating More Than 12 Hours Per Day

Distance to Nearest Receptor (m)	25	30	35	40	45	50	55	60
Ampere-Hours/yr (x10^6)	1.80	1.80	1.80	1.80	1.80	1.80	1.92	2.05
Annual Emissions (lbs/yr)	0.039	0.039	0.039	0.039	0.039	0.039	0.042	0.044
Distance to Nearest Receptor (m)	65	70	75	80	85	90	95	100
Ampere-Hours/yr (x10^6)	2.20	2.38	2.58	2.74	2.92	3.12	3.35	3.62
Annual Emissions (lbs/yr)	0.048	0.051	0.056	0.059	0.063	0.068	0.073	0.078

Table 7-4

Decorative Chromiume ~~P~~Electroplating and Chromic Acid Anodizing Operations Without Air Pollution Control

Distance to Nearest Receptor (m)	25	30	35	40	45	50	55	60
Ampere-Hours/yr (x10^6)	1.15	1.31	1.52	1.80	2.22	2.89	3.19	3.56
Annual Emissions (lbs/yr)	0.025	0.028	0.033	0.039	0.048	0.063	0.069	0.077
Distance to Nearest Receptor (m)	65	70	75	80	85	90	95	100
Ampere-Hours/yr (x10^6)	4.03	4.64	5.47	5.92	6.46	7.10	7.88	8.87
Annual Emissions (lbs/yr)	0.088	0.101	0.119	0.129	0.140	0.154	0.171	0.193

Appendix 8 – Information Demonstrating an Alternative Method(s) of Compliance Pursuant to Paragraph (d)(6).

The owner or operator of a facility applying for approval of an alternative method of compliance must submit to the District the following information.

1. A performance test as specified in subdivision (e). The test shall have been conducted in a manner consistent with normal electroplating or anodizing operations.
2. A demonstration that the alternative method achieves an equal or greater amount of reductions in hexavalent chromium emissions than would be achieved with direct compliance with the applicable emission rate in (c)(11)(A).
3. Calculations based on scientifically valid risk assessment methodologies demonstrating that the alternative method results in reducing risk equally or greater than the risk reduction that would be achieved by direct compliance with the applicable emission rate in Table 2 of subparagraph (c)(11)(A). A facility using in-tank controls shall only be modeled as a volume source and the resulting risk compared to the same facility modeled as a point source.
4. Documentation which demonstrates that the method is enforceable, including an operation and maintenance plan, an inspection and maintenance schedule, and a recordkeeping plan.

Appendix 9 - Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of Add-on Air Pollution Control Device(s) Pursuant to Paragraph (e)(7).

1. Applicability and Principle

1.1 Applicability. This method is applicable to all hard and decorative chromium electroplating and chromic acid anodizing operations where an add-on air pollution control device is used to reduce chromium emissions from the chromium electroplating or anodizing tank.

1.2 Principle. During chromium electroplating or anodizing operations, bubbles of hydrogen and oxygen gas generated during the process rise to the surface of the tank liquid and burst. Upon bursting, tiny droplets of chromic acid (chromium mist) become entrained in the air above the tank. Collection of this chromium mist is achieved by the ventilation system associated with the add-on air pollution control device for the tank(s) where chromium emissions are reduced downstream. Emission control efficiency at the exhaust of an add-on control device is related to capture efficiency at the inlet of the ventilation system. For this reason, it is imperative that 100% capture efficiency is maintained. A smoke device placed within the area where collection of chromic mist by the ventilation system occurs reveals this capture efficiency.

2. Apparatus

2.1 Smoke Generator. Adequate to produce a persistent stream of visible smoke (e.g., Model #15-049 Tel-Tru™ T-T Smoke Sticks from E. Vernon Hill, Incorporated).

3. Testing Conditions

The smoke test shall be conducted while the add-on air pollution control device is in normal operation and under typical draft conditions representative of the facility's chromium electroplating and/or chromic acid anodizing operations. This includes cooling fans and openings affecting draft conditions around the tank area including, but not limited to, vents, windows, doorways, bay doors, and roll-ups. The smoke generator must be at full generation during the entire test and operated according to manufacturer's suggested use.

3. Procedure

The smoke test shall be conducted over a minimum twelve point matrix evenly distributed over the entire liquid surface of each chromium electroplating or chromic acid anodizing tank vented to the add-on air pollution control device. Place the aperture of the smoke device at each point of the matrix at a height within one inch above the tank top. Observe collection of the smoke to the collection location(s) of the ventilation system. An

acceptable smoke test shall demonstrate a direct stream to the collection location(s) of the ventilation system without meanderings out of this direct path. Record these observations at each of the points on the matrix providing a qualitative assessment of the collection of smoke to the ventilation system. The test shall also be documented by photographs or video at each point of the matrix.

APPENDIX B

CONSTRUCTION AND OPERATION

EMISSIONS CALCULATIONS

A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009

PAR 1469 Affected Facilities	Maximum No. of HEPA Systems Installed in 2009	Maximum No. of HEPA Systems Installed in one day
53	54	4

Construction Equipment Hours of Operation

Construction Activity	Equipment Type	Pieces of Equipment	Hrs/day	Crew Size	Total Crew Size on site
Portable Equip. Operation	Air Compressor	1	4	1	4
(Actual Construction of Control Equipment)	Welder	1	4	1	

Construction Equipment Emission Factors

Equipment Type*	VOC lb/hr	CO lb/hr	NOx lb/hr	SOx lb/hr	PM10 lb/hr	PM2.5 lb/hr	CO2 lb/hr	CH4 lb/hr
Air Compressor < 50 HP	0.122	0.2867	0.2416	0.0003	0.0275	0.0253	22.3	0.011
Welder < 50 HP	0.1292	0.3084	0.276	0.0003	0.0299	0.027508	26	0.0117

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009

Construction Vehicle (Mobile Source) Emission Factors for Year 2009 Construction Related Activity	VOC lb/mile	CO lb/mile	NOx lb/mile	SOx lb/mile	PM10 lb/mile	PM2.5 lb/mile	CO2 lb/mile	CH4 lb/mile
Offsite (Construction Worker - Passenger Vehicle)	0.00099245	0.00968562	0.00100518	0.00001066	0.00008601	0.00005384	1.09755398	0.00008767
Offsite (Heavy Duty Delivery Truck)	0.00329320	0.01282236	0.04184591	0.00004013	0.00199572	0.00175227	4.21080792	0.00015249

EMFAC 2007 (v2.3) Emission Factors (On-Road) for Scenario Year 2009

Passenger Vehicles/Light Duty Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Heavy-Duty Delivery Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (continued)

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker - passenger vehicle)	8	25
Offsite (Heavy Duty Delivery Truck)	2	40

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type*	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Air Compressor < 50 HP	0.49	1.15	0.97	0.00	0.11	0.10	89.20	0.04
Welder < 50 HP	0.52	1.23	1.10	0.00	0.12	0.11	104.00	0.05
TOTAL	**1.00**	**2.38**	**2.07**	**0.00**	**0.23**	**0.21**	**193.20**	**0.09**

*Equipment is assumed to be diesel fueled.

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x No. of Workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Construction Worker Vehicle)	0.20	1.94	0.20	0.00	0.02	0.01	219.51	0.02
Offsite (Heavy Duty Delivery Truck)	0.26	1.03	3.35	0.00	0.16	0.14	336.86	0.01
TOTAL	**0.46**	**2.96**	**3.55**	**0.01**	**0.18**	**0.15**	**556.38**	**0.03**

Total Incremental Combustion Emissions from Construction Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Equipment & Workers' Vehicles (1 facility)	**1**	**5**	**6**	**0.01**	**0**	**0**	**750**	**0**
Equipment & Workers' Vehicles (4 facilities)	**6**	**21**	**22**	**0**	**2**	**1**	**2998**	**0**
Significant Threshold	75	550	100	150	150	55	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a

A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (concluded)

Incremental Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Construction Activity	Total Project Hours of Operation*	Equipment Type	Diesel Fuel Usage (gal/hr)**	Diesel Fuel Usage (gal/yr)**	Gasoline Fuel Usage (gal/yr)***
Operation of Portable Equipment	216	Welding Machines	1.177	254.23	N/A
Operation of Portable Equipment	216	Air Compressors	2.904	627.26	N/A
Workers' Vehicles - Commuting	N/A	Passenger Vehicle/Light-Duty Trucks	N/A	N/A	2700.00
Workers' Vehicles - Offsite Delivery/Haul	N/A	Heavy-duty Delivery Truck****	N/A	883.44	N/A
			TOTAL	**1764.93**	**2700.00**

*Assume construction will take approximately 1 day (8 hrs/day max) to up to 5 days, but welder will only be needed for ~4 hours per day.

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.

***Assume that construction workers' commute vehicle/pick-up truck uses gasoline and get 20 mi/gal and round trip length is 50 miles and assume that heavy-duty delivery truck uses diesel and gets 4.89 mi/gal with round trip length of 80 miles.

B. Potential Operation Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009

No. of Facilities Installing HEPA systems in 2009	Maximum No. of HEPA Systems Installed in 2009	No. of Filters Needed in 2009	Maximum No. of Facilities receiving HEPA systems to be delivered in any 1 day
53	54	492	4

Operation Vehicle (Mobile Source) Emission Factors for Year 2009 **Construction Related Activity**	VOC lb/mile	CO lb/mile	NOx lb/mile	SOx lb/mile	PM10 lb/mile	PM2.5 lb/mile	CO2 lb/mile	CH4 lb/mile
Offsite (Heavy Duty HEPA filter Delivery Trucks)	0.00329320	0.01282236	0.04184591	0.00004013	0.00199572	0.00175227	4.21080792	0.00014201

EMFAC 2007 (v2.3) Emission Factors (On-Road) for Scenario Year 2009
Heavy-Duty Delivery Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day
Offsite (Heavy Duty Delivery Truck)	1

Incremental Increase in Offsite Combustion Emissions from Operation/Delivery Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) X number of trucks/day = Offsite Operation Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Heavy Duty HEPA filter Delivery Trucks)	0.26	1.03	3.35	0.00	0.16	0.14	336.86	0.01
TOTAL	**0.26**	**1.03**	**3.35**	**0.00**	**0.16**	**0.14**	**336.86**	**0.01**

Total Incremental Combustion Emissions from Operation Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Delivery Vehicles (1 truck/day)	**0**	**1**	**3**	**0**	**0**	**0**	**337**	**0**
Delivery Vehicles (4 trucks/day)	**1**	**4**	**13**	**0**	**1**	**1**	**1,347**	**0**
Significant Threshold	55	550	55	150	150	55	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a

B. Potential Operation Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (concluded)

Incremental Increase in Fuel Usage From Delivery Vehicles

Operation Activity	Total Project Hours of Operation	Equipment Type	Diesel Fuel Usage (gal/hr)	Diesel Fuel Usage (gal/yr)*	Gasoline Fuel Usage (gal/yr)
Workers' Vehicles - Delivery of HEPA filters	N/A	Heavy-duty Delivery Truck	N/A	867.08	N/A
		TOTAL		**867.08**	**0.00**

*Assume that heavy-duty delivery truck uses diesel and gets 4.89 mi/gal with round trip length of 80 miles.

C. Potential GHG Emissions Due to the Implementation (Construction & Operation) of PAR 1469 for Compliance Year 2009

PAR 1469 Affected Facilities in 2009	Maximum No. of HEPA Systems Installed in 2009	Maximum No. of HEPA Systems Installed in one day
53	54	4

	CO2 lb/day	CH4 lb/day	CO2 lb/yr	CH4 lb/yr	CO2eq fromCH4 lb/yr	CO2 + CO2eq lb/yr	CO2 + CO2eq metric tons/yr
Construction: Equipment & Workers' Vehicles	750	0	39,727.50	6.39	134.15	39,861.65	18.08
Operation: Workers' Vehicles	337	0.01	17,853.83	0.60	12.64	17,866.47	8.10
TOTAL	**1,086**	**0**	**57,581**	**7**	**147**	**57,728**	**26**

Notes:
1 metric ton = 2,205 pounds
CH4 has a global warming potential at 21 times that of CO2.

D. Operation–Related Emissions Calculations Related to Implementation of PAR 1469

Estimated Increase in VOC Emissions Due to Increased Use of Chemical Fume Suppressants

Assumptions:

1. For a worst-case calculation, all facilities are assumed to use the product 'Fumetrol 140' which at has been determined to have the highest VOC content (50 g/l) of any of chemical fume suppressants available on the market.
2. Based on fume suppressant manufacturer data, a fume suppressant usage rate of 0.075 liters per 10,000 ampere-hours is assumed.
3. The total estimated annual rectifier usage is a combination of actual rectifier usage data provided by each affected facility, plus a calculated adjustment to permitted rectifier usage rates for when actual data were not available.
4. The average annual operating hours for all the affected facilities is assumed to be 260 days per year.

Table B-1
Summary of Total Estimated Annual Rectifier Usage per Type of Plating Activity

Type of Plating Activity	**No. of Tanks to Start Using Chemical Fume Suppressants**	**Total Estimated Annual Rectifier Usage** (Ampere-Hr/year)
Hard	1	1,400,000
Decorative	0	0
Anodizing	0	0
Total	**1**	1,400,000

Equation:

Annual Rectifier Usage (ampere-hr/year) x Fume Suppressant Usage Factor (0.075 liters of fume suppressants/10,000 ampere-hr) x Worst-case VOC content of Fume Suppressant (lb VOC/gal of fume suppressant) = Estimated Amount of VOCs to be emitted from new usage of fume suppressants per year (lb VOC/year)

Estimated Amount of VOCs to be emitted from new usage of fume suppressants = (1,400,000 ampere-hr/year) x (0.075 liter /10,000 ampere-hr) x (50 grams VOC/liter) x (1 pound /454 grams) =

1.16 pounds VOC/year x (1 year/ 260 days) = **0.004 pound VOC/day**

E. Estimated Ventilation Rates for Designing New HEPA Filtrations Systems

Assumptions:

1. The surface area of each plating or anodizing tank is estimated to be sized at 36 square feet and the ventilation rate is approximately 150 cubic feet per minute (cfm) per square foot of tank surface area.
2. Based on vendor-supplied data, control systems and the individual filters are typically sized to handle either 5,000, 10,000, or 20,000 cfm. Therefore, the calculated size of the control system is initially based on the tank surface area and then rounded to the nearest standard size relative to the number of tanks. For example, a facility requiring controls for one tank would have a calculated ventilation rate of 5,400 cfm but it would be sized for a 5,000 cfm system to establish a designed ventilation rate. However, if three or more tanks are vented to HEPA, the assumed filter sizes are rounded up. Also, based on the designed ventilation rate, the number of HEPA filters required is typically one filter module for every 1000 cfm and then rounded up to fit into either a 2 x 3, 3 x 4, or 3 x 6 configuration. Table B-2 summarizes these assumptions.

Table B-2
Calculated and Vendor Design Ventilation Rates and Filter Parameters for HEPA Systems

No. of Tanks	Calculated Ventilation Rate for Entire System (cfm)	Designed Ventilation Rate for Entire System (cfm)	Estimated Total Number of HEPA Filters Needed
1	5,400	5,000	6
2	10,800	10,000	12
3	16,200	20,000	18

3. To comply with PAR 1469, 56 new air pollution control systems venting 66 tanks at 55 facilities are expected to be installed and 11 existing air pollution control systems venting 16 tanks are expected to be retrofitted, as summarized in Table D-2.

Table B-3
Estimated Number of HEPA Systems & Filters Needed
Per Designed Ventilation Rate

Designed Ventilation Rate (cfm)	No. of HEPA Systems Needed per Designed Ventilation Rate	No. of HEPA Filters Needed per Designed Ventilation Rate
5,000	57	342
10,000	5	60
20,000	5	90
Total	**67**	**492**

F. Electricity and Water Consumption From Operation of HEPA Filtration Systems

Total Number of Facilities: 65

Total Number of HEPA Filtration Systems Equipped with Mist Eliminators: 67

Number of Systems per Ventilation Rate:
57 at 5,000 cfm; 4 at 10,000 cfm; and, 6 at 20,000 cfm

Assumptions:

1) The horse-power (hp) rating of the blower/exhaust fan depends on the ventilation rate of the HEPA filtration system. Likewise, the mist eliminator wash down rate in gallons per minute (gpm) depends on the ventilation rate. The following blower ratings and wash down rates are assumed for the following ventilation rates:

Ventilation Rate (cfm)	Blower Rating (hp)	Mist Eliminator Wash Down Rate *(gpm)
5,000	15	6
10,000	20	12
20,000	50	54

* Washdown rate in gallons per minute, only requires one minute's worth of washdown per 12-hour period.

2) Electricity is used to operate the HEPA filtration systems.

3) Water is used for washing down the mist eliminator.

4) Independent of the ventilation rate, the operating schedule of each HEPA system is assumed to be 12 hr/day; 5 days/wk; 52 wk/yr (3,120 hr/yr).

5) Abbreviations Key:

hp	= horsepower	W	= watt
hr	= hour	M	= mega
yr	= year	k	= kilo
wk	= week	scf	= standard cubic feet
lb	= pound	gpm	= gallons per minute

5,000 cfm Systems

Facilities installing HEPA system rated at 5,000 cfm = 57

Electrical Rating = 15 hp

Wash Down Rate = 6 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 5,000 cfm system =
(15 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 34,899 kW-hr/yr

Total water consumption for one 5,000 cfm system =

(6 gpm) x (1 minute/12 hr/day) = 6 gallons/day

Total kW-hr for 57 facilities each equipped with a 5,000 cfm system = (34,899 kW-hr/yr x 57) = 1,989,243 kW-hr/yr

Instantaneous Electricity Used for 57 facilities equipped with a 5,000 cfm system = 1,989,243 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.637 MW

Water Demand for 57 facilities equipped with a 5,000 cfm system = (6 gallons/day x 57) = 342 gallons/day

10,000 cfm Systems

Facilities installing HEPA system rated at 10,000 cfm = 5

Electrical Rating = 20 hp

Wash Down Rate = 12 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 10,000 cfm system =
(20 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 46,532 kW-hr/yr

Total water consumption for one 10,000 cfm system =
(12 gpm) x (1 minute/12 hr-day) = 12 gallons/day

Total kW-hr for 5 facilities each equipped with a 10,000 cfm system = (46,532 kW-hr/yr x 5) = 232,658 kW-hr/yr

Instantaneous Electricity Used for 5 facilities equipped with a 10,000 cfm system = 232,658 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.075 MW

Water Demand for 5 facilities equipped with a 10,000 cfm system = (12 gallons/day x 5) = 60 gallons/day

20,000 cfm Systems

Facilities installing HEPA system rated at 20,000 cfm = 5

Electrical Rating = 50 hp

Wash Down Rate = 54 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 20,000 cfm system =
(50 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 116,329 kW-hr/yr

Total water consumption for one 20,000 cfm system =
(54 gpm) x (1 minute/12 hr-day) = 54 gallons/day

Total kW-hr for 5 facilities each equipped with a 20,000 cfm system = (116,329 kW-hr/yr x 5) = 581,646 kW-hr/yr

Instantaneous Electricity Used for 5 facilities equipped with a 20,000 cfm system = 581,646 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.186 MW

Water Demand for 5 facilities equipped with a 20,000 cfm system = (54 gallons/day x 5) = 270 gallons/day

GRAND TOTALS FOR FACILITY UNIVERSE:

Total MW-hrs per year of electricity used =
1989 MW-hrs/yr + 233 MW-hrs/yr + 582 MW-hrs/yr = 2,804MW-hrs per year

0.637 MW+ 0.075 MW + 0.186 MW = 0.898 MW (instantaneous demand)

Total gallons per day of water used =
342 + 60 + 270 = 672 gallons/day

G. Natural Gas Consumption From Power Plants to Generate Electricity for Operation of HEPA Filtration Systems

From Section F:

Total MW-hrs per year of electricity needed =
1989 MW-hrs/yr + 233 MW-hrs/yr + 582 MW-hrs/yr = 2,804MW-hrs per year

To convert the electricity demand into natural gas demand at the power plant, the following criteria is applied:

1 MW = 1,000 kW of electricity
1 kW-hr = 3,412 BTU
1 CF = 1,088 BTU

2,804 MW-HRS/YR X 1000KW/1MW X 3412 BTU/1 KW-HR X 1 CF/1,088 BTU = 8.79 MMCF OF NATURAL GAS DEMAND/YR